Fukushima Daiichi Accident Study Information Portal (FDASIP)

User's Manual

Version 1.0.26



1. Introduction

The accident at the Fukushima Daiichi nuclear power station in Japan is one of the most serious in commercial nuclear power plant operating history. As its story unfolds, much will be learned that may be applicable to the U.S. reactor fleet, nuclear fuel cycle facilities and supporting systems, and the international reactor fleet. For example, lessons from Fukushima may be applied to emergency response planning, reactor operator training, accident scenario modeling, human factors engineering, radiation protection, and accident mitigation; as well as influence U.S. policies towards the nuclear fuel cycle including power generation, and spent fuel storage, reprocessing, and disposal.

The NRC and DOE NE have agreed to jointly sponsor an accident reconstruction study. The study team will include subject matter experts from Idaho National Laboratory (INL), Oak Ridge National Laboratory (ORNL), and Sandia National Laboratories (SNL).

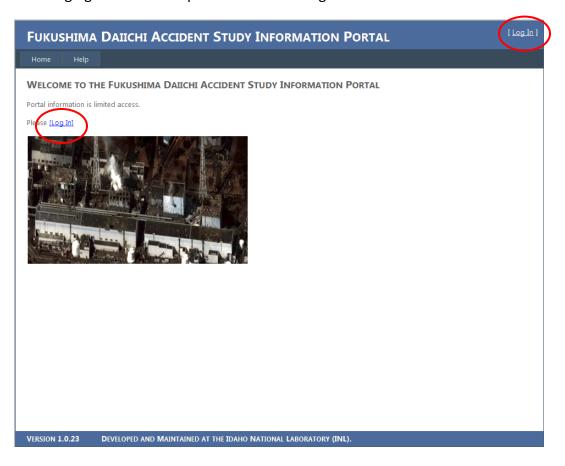
The intent of this portal is to provide an approach to collecting, storing, retrieving, and validating information and data for use in reconstructing the Fukushima accidents and to assist the other team members by providing support for the technical basis behind the event reconstruction.

2. Document Overview

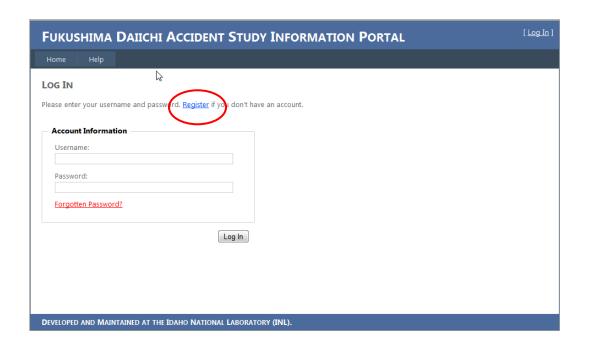
This User's Manual describes how to use the Fukushima Accident Study Information Portal (FDASIP) website that has been created to collect, store, retrieve and validate the data gathered for use in reconstructing the Fukushima accidents. The following sections of this document describe the different functions within the website. Different functions require specific roles to access. The Roles section discusses each of the roles and the functions they can access.

3. Registration and Login

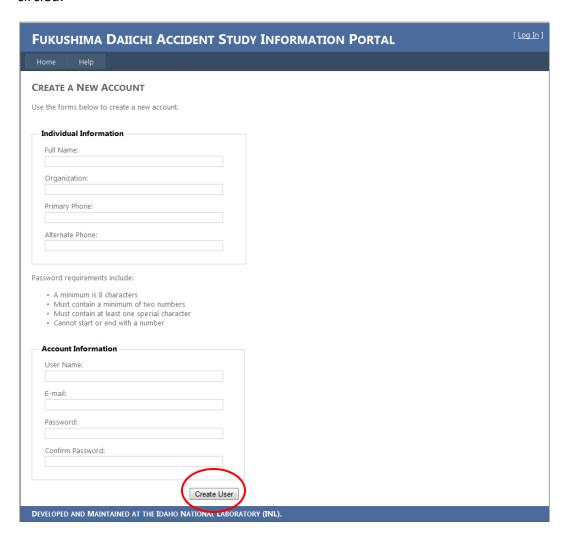
When the user visits the portal at **Fukushima.inl.gov**, the portal page is displayed. This page has the "Log In" link above the picture as well as in the upper, right-hand corner. The following figure shows the portal with both "Log In" links.



To log in to the portal, a user must Press the "Log In" link located in the upper right-hand corner. Pressing this link takes the user to the Log In screen. If the user has not yet registered for access, he must register by selecting the "Register" link. The following figure shows the Log In screen with the Register link circled.

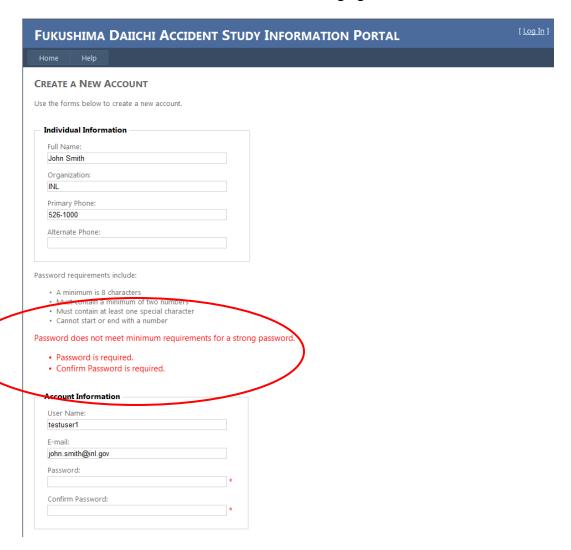


The Register link will take the user to the registration page and allow him to register for a username. The following figure shows the Register page with the Create User button circled.



To create a new account, the user must enter Full Name, Organization, and Primary Phone. An Alternate Phone is optional. The User Name, E-mail, and "DOE-strength" password are also required. Note that all passwords are encrypted on the SQL server. When the required information is fully entered, press the Create User button.

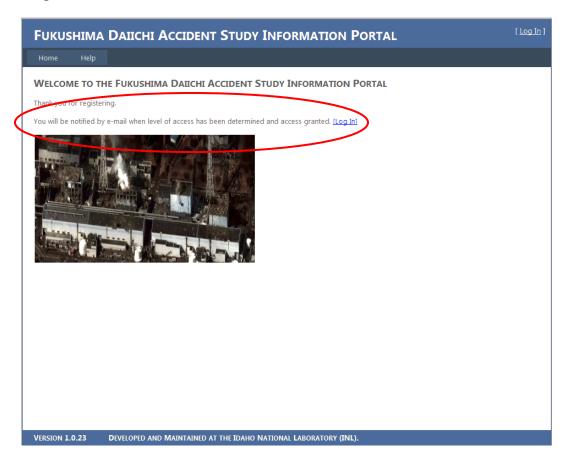
If any of the required information is not entered, if the username is not available, or the password does not meet the strength criteria, an appropriate message will be displayed in the center of the screen as shown in the following figure.



NOTE: The password must contain a minimum of 8 characters, at least two numbers, and at least one "special" character (i.e. not a number or a letter). The password cannot start or end with a number.

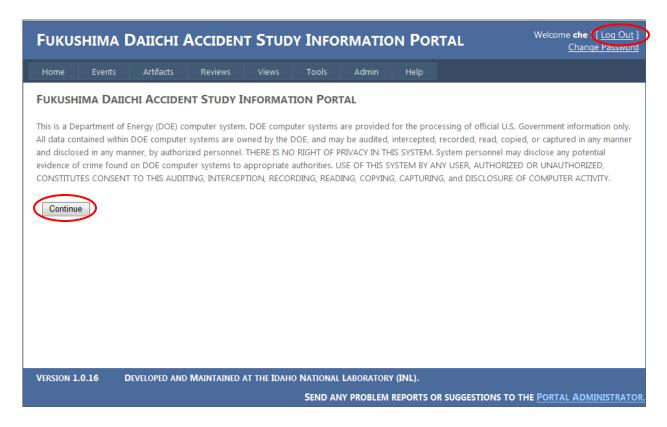
Once all the required information is correctly entered and the user has pressed the Create User button, the welcome screen will be presented with a message stating "You will be notified by e-mail when level of access has been determined and access granted." This screen is showed in the following figure.

NOTE: The user will not be able to Log In to the portal until the administrator has assigned the appropriate role(s). An e-mail will be sent to the user indicating what role(s) have been assigned.



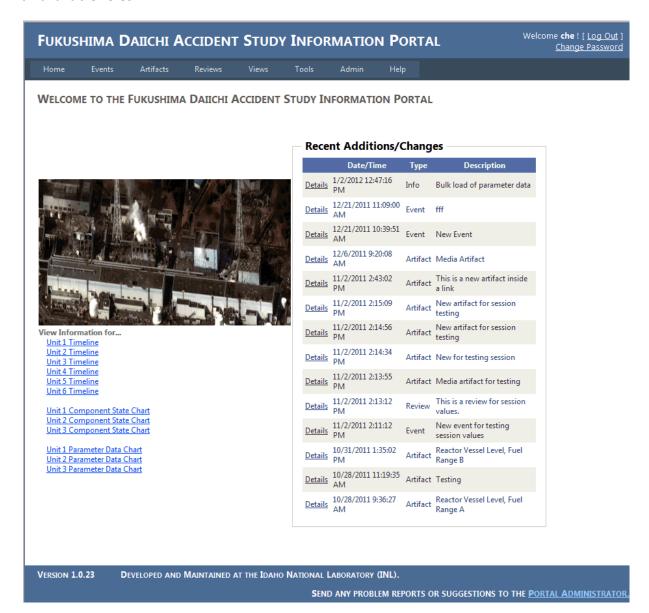
Once the "FDASIP Roles Assigned" e-mail has been received by the user, he can now log in to the portal. Once again the user will go to **Fukushima.inl.gov** and select the Log In link. The Log In page will be displayed and the user will enter the User Name and Password and press the "Log In" button.

Logging in will bring the user to the Warning page. This page warns the user that this is a Department of Energy (DOE) computer system and that monitoring is performed. The figure below shows the warning screen with both the "Continue" button and the "Log Out" link circled.

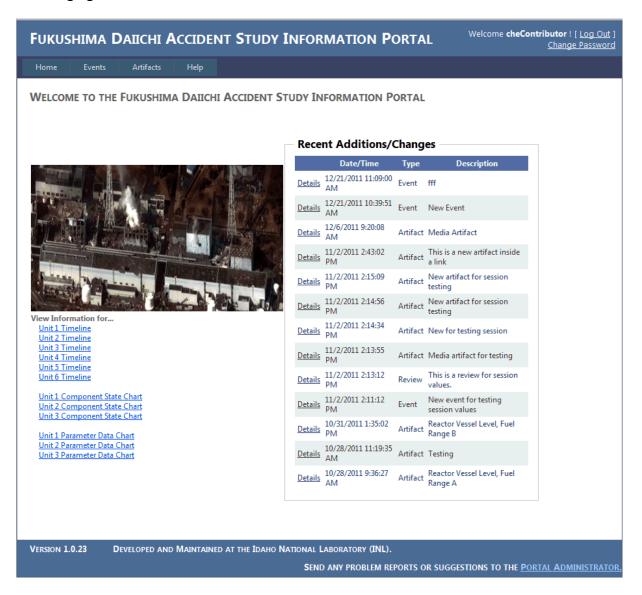


Pressing the "Continue" button means the user acknowledges the warning and consents to the statements presented in the warning. If you do not wish to continue, press the "Log Out" link.

Pressing the "Continue" button will bring the user to the Welcome page. The Welcome page shows the user name in the upper right-hand corner with the <u>Log Out</u> link, the menu options based on the user's assigned roles and the Recent Additions/Changes table. The following figure shows the Welcome page and all of the menu items available if a user had all available roles.



NOTE: A user will only see the menu options to which he has access. For example, someone who is a contributor but not a reviewer will have the menu options shown in the following figure.



4. Roles

Roles are assigned by the System Administrator after a user has registered for access. The roles include Contributor, Reviewer, and User.

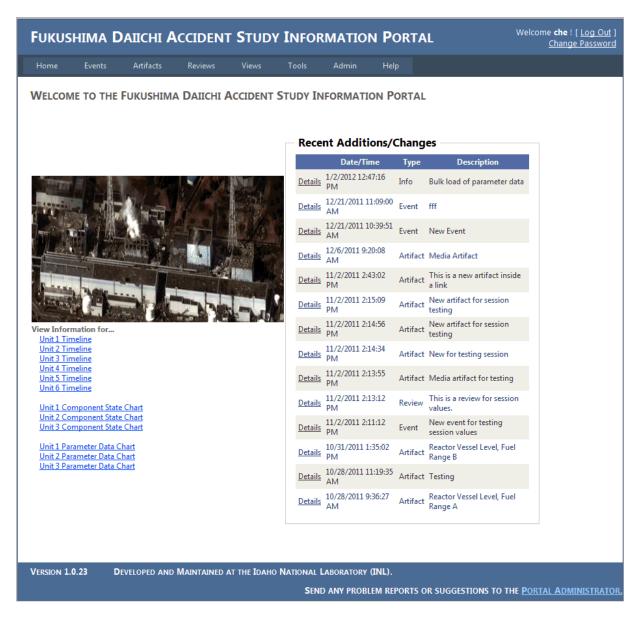
 The Contributor role will allow the user to create and modify the Event and Artifact data. The contributor will not have access to the Reviews except to associate/disassociate Reviews from Events and Artifacts via the Events and Artifacts pages.

- The Reviewer role will allow the user to create and modify Review data. The Reviewer will have view only access to Event and Artifact data except to associate/disassociate Reviews from Events and Artifacts. Association can be performed via the Review page or the Events or Artifacts page.
- The User role will have read only access to the Events and Artifacts pages. A User also has access to the View menu which contains predefined views of the data for analysis.
- The Public role will allow a user to view only data marked as "Public." This role will not be allowed to update or create data. The Public role will have access to the View menu but the views will only show data marked as "Public." The "Public" view is currently not available.

A user may have multiple roles. Access will be the summation of all roles assigned. For example, a user with both the contributor role and the Reviewer role will be able to create and modify Event and Artifact data as well as Review data.

5. Welcome Page (All Roles)

The Welcome Page is where the user is taken upon initial log in to the portal. This page can be returned to at any time by selecting "Home" from the menu bar. The following figure shows the Welcome page. The menus shown in this figure and all the other figures will vary depending on what role(s) the logged in user is assigned.

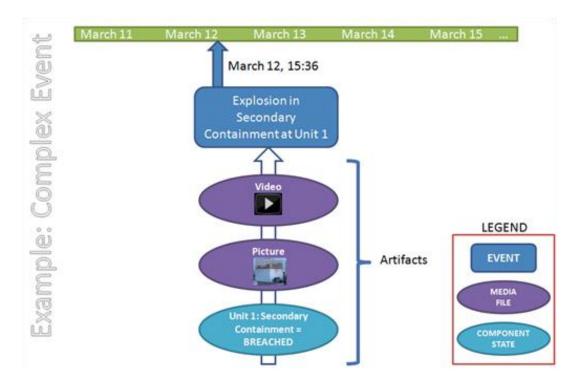


The Recent Additions/Changes table shows the most recent activities in the system. This includes additions/changes to Events, Artifacts, Reviews, and system messages. Selecting the <u>Details</u> link will navigate the user to the appropriate page with the chosen item selected. For example, selecting the last item shown in the figure above would display the Artifacts page with the "Reactor Vessel Level, Fuel Range A" artifact.

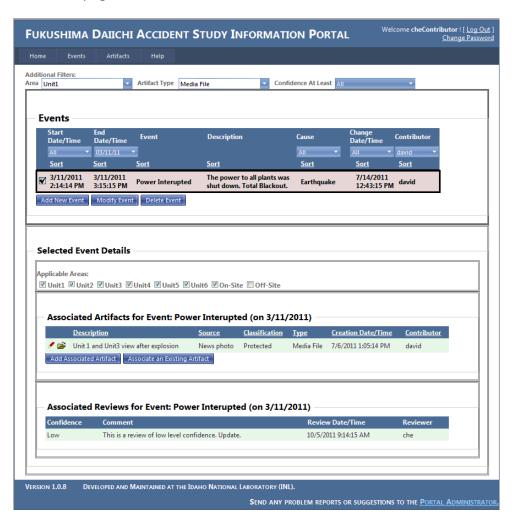
In addition to the Recent Additions/Changes table, there are links to several views. These views are available from the Views menu but the links are placed here for convenience. Click on the link corresponding to the desired view (i.e. Timeline, Component State Chart, or Parameter Data Chart) and the desire unit (i.e. Unit 1, Unit 2, etc).

6. Events (All Roles)

An Event is one of the primary portal objects used to denote points or periods in time when something important to the Fukushima accident took place. The Event object is used to provide a link between the flow of time during the accident (i.e., "the timeline") and supporting (optional) information (such pictures, analysis output, or plant data) called "Artifacts." This concept of linking events to a time line AND assigning supporting information (Artifacts) is shown below.



Events are available for creation, modification and deletion to the Contributor role. The Reviewer and User roles have read-only access for viewing. The Event page shows all events. For each event all the associated Artifacts (if any) are shown and any associated Reviews are shown. If there are no associated Artifacts or Reviews, the table will show "No Associated Artifacts" or "No Associated Reviews" as appropriate. The figure below shows the Events page.



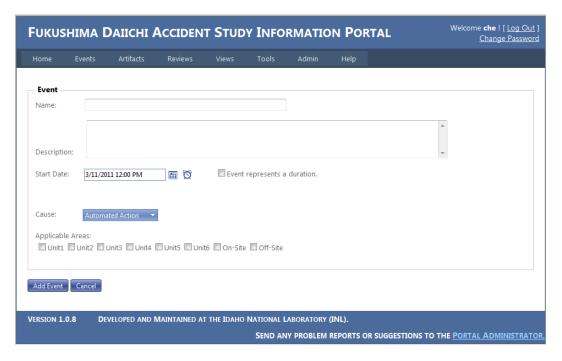
6.1 Select an Event

To select an event, click the check box on the row of the event you wish to select. The following figure shows three events on the event page with the third event selected and the check box circled.



6.2 Add New Event (Contributor Role)

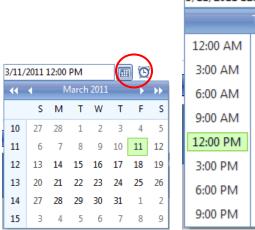
To add a new event, press the "Add New Event" button found below the Events table. The Add Event page will be displayed as shown in the following figure.

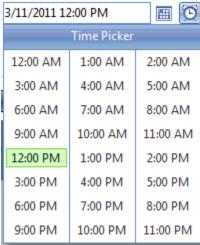


Enter the Name of the Event and the Description. If the event represents a duration, select the "Event represents a duration" check box found to the right of the Start Date field. This will cause End field to be displayed.

When you click on the calendar button (circled below left), a calendar will pop up to help you select the date as shown in the figure on the left. When you click on the

clock button (circled below right), a Time Picker will help you select the time as shown in the picture on the right. Only the top of the hour is displayed in the time picker. Once the hour is selected you can modify the minutes in the text box. Alternatively, you can skip the buttons and type directly in the date/time text box.

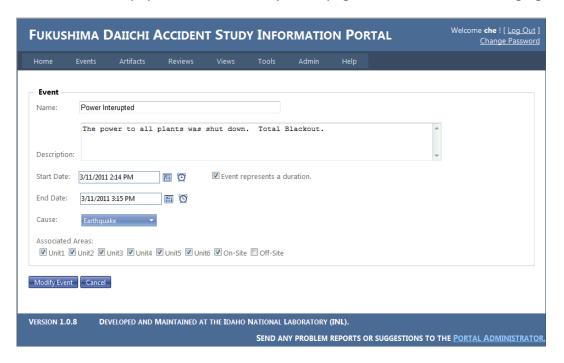




Select a Cause from the pull down list. Select the check box for each of the Areas applicable to the event. Press the Add Event button to create the Event and return to the Events page. Press the Cancel button return to the Events page without creating an Event.

6.3 Modify Event (Contributor Role)

To modify an event, select the event you wish to modify and press the "Modify Event" button. This button is found below the Events table and next to the "Add New Event" button. The Modify Event page will be displayed and it will be populated with the data of the event that was selected. This page looks the same as the Add Event page but with the data populated. The Modify Event page is shown in the following figure.



Make the desired changes and press the "Modify Event" button to save the changes and return to the Events page. Or press the "Cancel" button to return to the Events page without saving any changes. (See the previous section for details about setting the Start and End Date fields.)

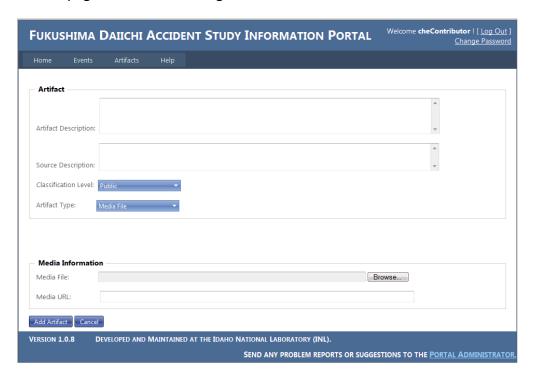
6.4 Delete Event (Contributor Role)

To delete an event, select the event and press the "Delete Event" button. This button is below the Events table after the "Modify Event" button. Deleting an event will delete the event and any associations to Artifacts or Reviews. It will not remove the Artifacts or Reviews to which it was associated. Once the delete button is pressed, confirmation window will be displayed. Press "OK" to delete the Event or "Cancel" to leave the Event intact.



6.5 Add Associated Artifact (Contributor Role)

The "Add Associated Artifact" button will create a new Artifact and associate it with the Event currently selected in the Events table. This button is found below the Associated Artifacts table on the Events page. Pressing this button will display the Add Artifact page as shown in the figure below.



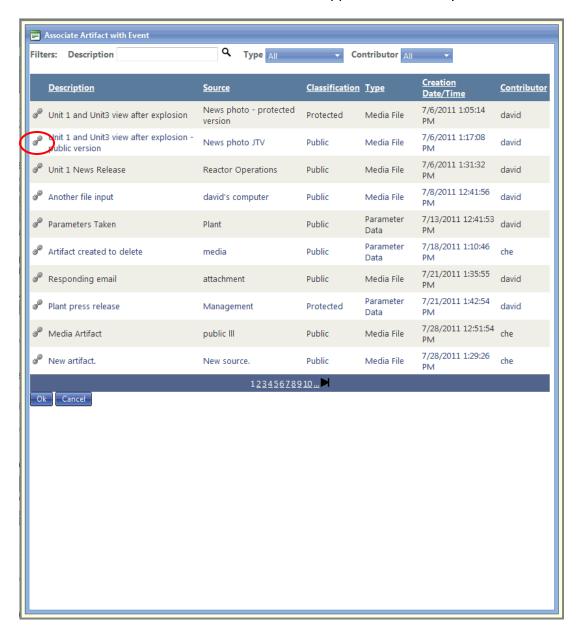
Once the data for the Artifact is added, press the "Add Artifact" button to create the artifact and the association and return to the Events page. Pressing "Cancel" will return to the Events page without creating an Artifact or an association. For more information about adding Artifacts, see the Add Artifact section.

6.6 Associate an Existing Artifact (Contributor Role)

To associate an existing Artifact to the currently selected Event, press the "Associate an Existing Artifact" button. This button is found below the Associated Artifacts table next to the "Add Associated Artifact" button. Pressing this button will display a window with all the available Artifacts as shown in the figure below with the link icon circled.

Because of the large number of Artifacts in the system it may be difficult to find a specific Artifact so the Artifacts can be filtered by Description, Type, and/or Contributor. The users who have created Artifacts are listed in the Contributor pull down and selecting one will display only those Artifacts created by that user. The Description filter will display any Artifacts that contain the search text entered in the

text box. Once the text is entered, either press Enter or press the Search icon and the filter will be applied. The Description filter may contain multiple words and spaces, but is case insensitive. The three filters will be applied cumulatively.



Note that any Artifact that has already been associated with this Event will not appear in the list. To associate or link the Artifact with the selected Event press the "link" icon and the selected Artifact will be associated to the selected Event. The Artifact will be displayed in the Associated Artifacts table as show in the figure below.



6.7 Delete an Artifact Association (Contributor Role)

To delete the association between an Event and an Artifact, press the eraser icon next to the associated Artifact. The figure below shows the Associated Artifacts table with the eraser icon circled.



NOTE: Pressing this icon will **delete the association** between the Event and the Artifact but it will not delete the Artifact itself. No confirmation will be presented: the association will simply be deleted. The Artifact will once again appear in the list of Artifacts to be associated with the Event and can be reassociated if desired.

6.8 Open an Associated Artifact

To open an Artifact from the Associated Artifacts table, press the open icon next to the associated Artifact. The figure below shows the Associated Artifacts table with the open icon circled.

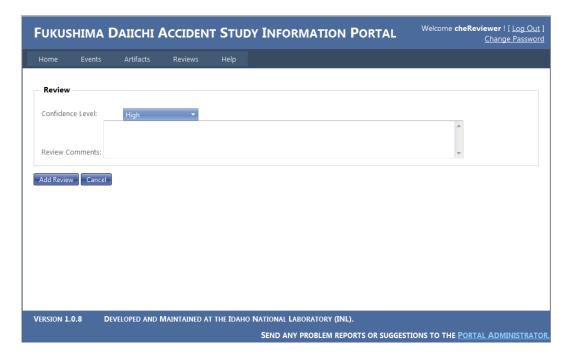


Selecting the open icon will take you to the Artifacts page with the desired Artifact selected. Please see the Artifacts section for more information.

6.9 Add Associated Review (Reviewer Role)

Only users with the "Reviewer" role will see the "Add Associated Review" button.

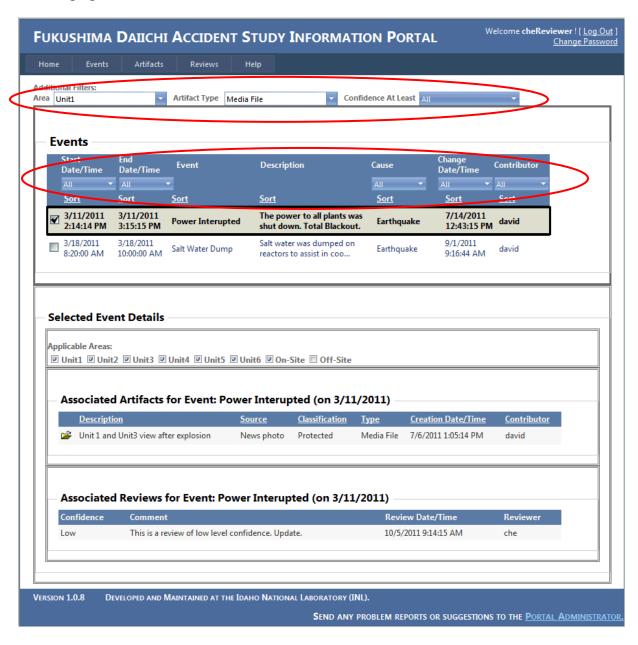
The "Add Associated Review" button will create a new Review and associate it with the Event currently selected in the Events table. This button is found below the Associated Reviews table on the Events page. Pressing this button will display the Add Review page as shown in the figure below.



Once the data for the Review is added, press the "Add Review" button to create the review and the association. You will then be returned to the Events page. Pressing cancel will return to the Events page without creating a Review or an association. For more information about adding Reviews, see the Add Review section.

6.10 Event Filtering

There may be a large number of Events entered in the system. Filtering is provided to assist the user in displaying a manageable subset of all the Events in the system. The first time a user visits the Events page, the Area filter will be set to "Unit1" and the Artifact Type filter will be set to "Media File." The global filters refer to filters that utilize data not displayed with the individual Events and are displayed above the Events table. The table filters refer to data displayed in the Events table. The table filters are shown in the header of the table below the appropriate header. The Global filters and the table filters can be applied simultaneously. The filters are shown in the following figure.

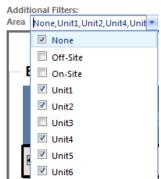


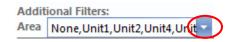
6.10.1 Global Filter

Global filters for Events include Area, Artifact Type, and Confidence. These filters are displayed as "additional Filters above the Events table. The Area filter will display any Events that have the selected Area assigned to the Event. (There may be multiple areas assigned to an Event.) The Artifact Type filter will display any Events that have the selected type of Artifact associated with the Event.

The Area and the Artifact Type Filters allow multiple selections. Click on the pull-down arrow (circled below on the right) and select the checkbox next to any of the areas/artifact types you wish to include in the filter. The figure on the left shows multiple areas selected. To close the list of areas, click on the pull-down arrow again or simply click anywhere outside the pull-down box. The selected areas will appear in the text portion of the field as shown in the figure on the right. If there are too many selections to see all of them in the text portion of the field, click on the arrow to activate the pull-down and all of the selected items will be checked.

None in the Area filter indicates that the filter will display Events that have no Area assigned to them. None in the Artifact filter indicates that the filter will display events that have no Artifacts assigned.



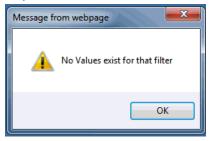


The confidence filter will display any Events that have associated Reviews of at least the selected value. For example, if Medium is selected any Events with Reviews of confidence level Medium or High will be displayed. If an Event has even one associated Review with a lower confidence, it will not be displayed by the filter. If an Event does not have any Reviews associated then it will not be displayed by the filter unless "All" or "Not Reviewed" is selected.

6.10.2 Table Filter

The table filters for Events include Start Date/Time, End Date/Time, Cause, Change Date/Time, and Contributor. The pull down list for each of the filters will contain all of the valid values for that filter. Selecting a value from a filter will display only the

values that match that filter. Note that the Start Date/Time and End Date/Time represent a range. For example, selecting a Start Date/Time will display only Events that began on or after at that same Date/Time. If both a Start and End Date/Time are selected, only events that begin and end between those dates will be displayed. Multiple filters can be selected simultaneously and the filter is applied cumulatively. For example, if the contributor is selected all Events created by that contributor will be displayed. If the Start Date/Time is then selected, all Events created by that contributor that begin after the selected Start Date/Time will be displayed. If the contributor is then changed to another contributor, All Events created by the newly selected contributor that begin after the selected Start Date/Time will be displayed. If the contributor was set back to "All" then all Events that begin after the selected Start Date/Time will be displayed. If a selected filter results in no data the following message will be displayed and the filter that caused the message will be set back to its previous value and the Events displayed will remain the same.

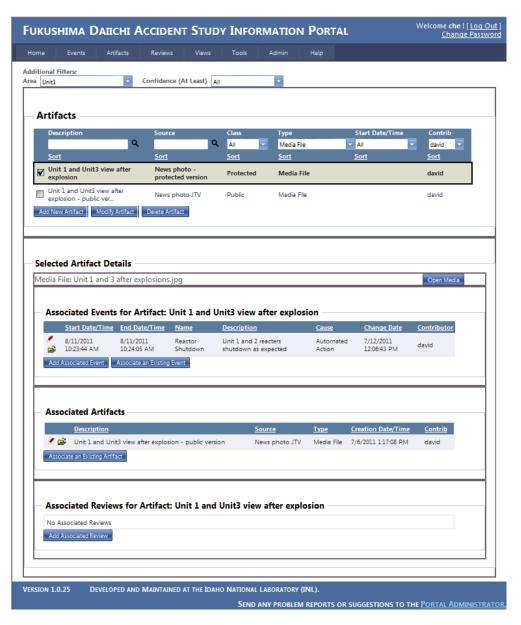


If a filter is selected and then the user navigates away from the page, the same filters will still be applied when returning to the page. For example, if a filter is selected and then the user selected the Artifacts or the Review page, then returns to the Events page, the same filter will be applied. Similarly, if a filter is applied and the user adds or modifies an Event, the same filter will be applied when the user completes or cancels the action.

There are two exceptions. If the user selects the <u>Details</u> link from the Recent Additions/Changes table on the Welcome page, all filters will be reset to "All" except the Area and the Artifact Type. The Area will be set to one of the Areas assigned to the event and the Artifact type will be set to the type of Artifact that is associated with the Event. If no Artifact is associated with the Event, then the Artifact type will be set to "None." The appropriate records will be displayed with the chosen Event selected. Similarly, if the user is on the Artifacts page and selects the open icon of an associated Event, all filters will be set to "All" except the Area and the Artifact Type which will be set appropriately and the chosen Event will be selected.

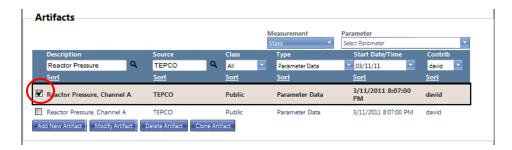
7. Artifacts (All Roles)

Artifacts are available for creation, modification and deletion to the Contributor Role. The Reviewer and User roles have read-only access for viewing. The Artifacts page shows all Artifacts. For each Artifact all the associated Events (if any) are shown and any associated Reviews are shown. If there are no associated Events or Reviews, the table will show "No Associated Events" or "No Associated Reviews" as appropriate. The figure below shows the Artifacts page.



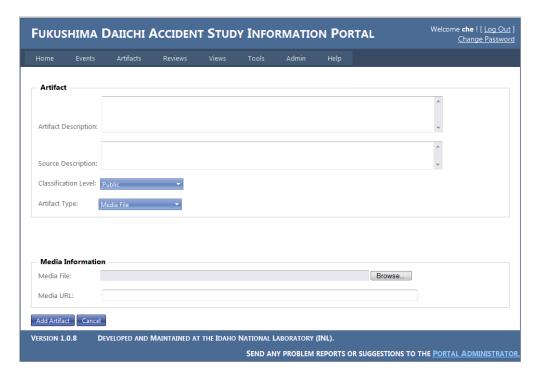
7.1 Select an Artifact

To select an Artifact, click the check box on the row of the Artifact you wish to select. The following figure shows five Artifacts on the Artifacts page with the second Artifact selected and the check box circled.



7.2 Add New Artifact (Contributor Role)

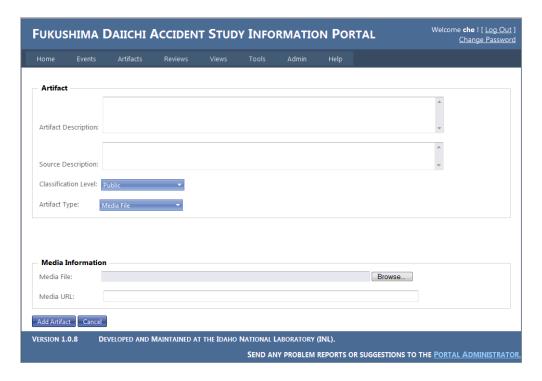
To add a new Artifact, press the "Add New Artifact" button found below the Artifacts table. The Add Artifact page will be displayed as shown in the following figure.



Enter the Artifact Description and Source which are both free text fields. Select the Classification Level of the Artifact and the Artifact Type. See the next sections for information about the different Artifact Types. Press the "Add Artifact" button to create the Artifact and return to the Artifacts page. Press the Cancel button to cancel adding and return to the Artifacts page.

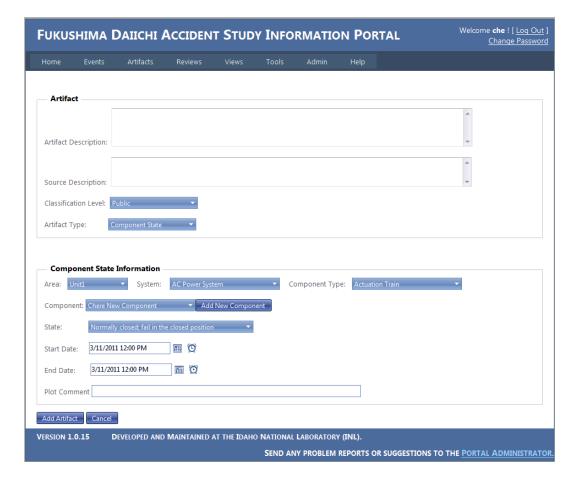
7.2.1 Media Artifact Type (Contributor Role)

The Media artifact type is the default artifact type. This artifact type allows the upload many different types of media including pictures, videos, spreadsheets, documents, etc. It also allows a URL to be entered. Either field may be entered or both fields may be entered. Use the "Browse" button to navigate to the media file. The following figure shows the Add Artifact page when creating a Media Artifact.



7.2.2 Component State Artifact Type (Contributor Role)

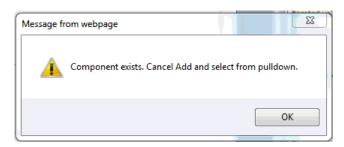
The Component State Artifact requires the user to select the appropriate Area, System, Component Type, Component, and State from pull down lists.



The Component pull down list will update depending on the System and Component Type selected. If the desired Component is not in the pull down list, it can be added using the "Add New Component" button. It will show the selected System and Component Type to which the component will be added. Enter the Component and then press Ok and the Component will be added to the database as well as populated in Component text field. Press Cancel and the window will be closed without added a Component. The figure below shows the Add Component window.

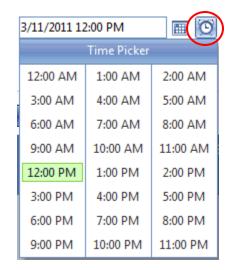


If the component entered on the Add Component window already exists, you will see the following message. Press OK to close this message window and either change the name of the component and press Ok on the Add Component window or press Cancel on the Add Component window and select the desired Component from the pull down list.



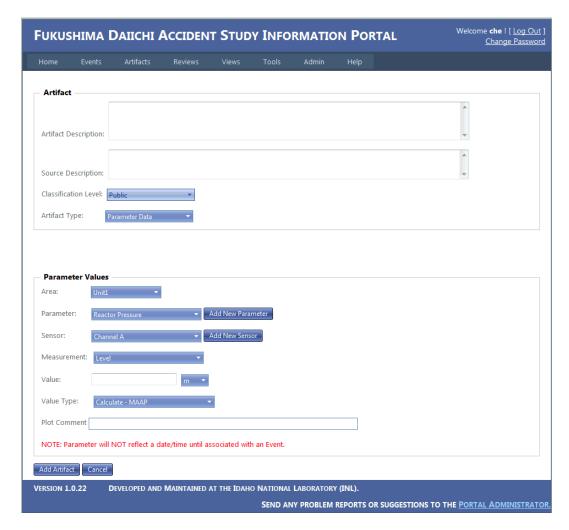
The start and end dates/times are required. When you click on the calendar button (circled below left), a calendar will pop up to help you select the date as shown in the figure on the left. When you click on the clock button (circled below right), a Time Picker will help you select the time as shown in the picture on the right. Only the top of the hour is displayed in the time picker. Once the hour is selected you can modify the minutes in the text box. Alternatively, you can skip the buttons and type directly in the date/time text box.



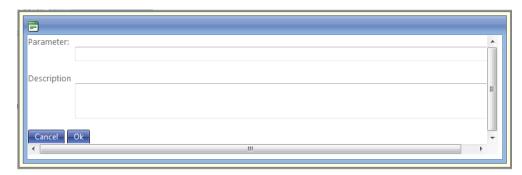


7.2.3 Parameter Artifact Type (Contributor Role)

The Parameter artifact type requires the user to select the Area, Parameter, and Measurement from pull down lists as shown in the following figure.

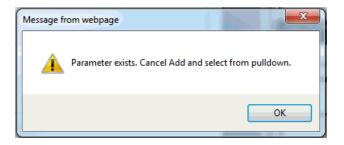


If the desired parameter is not available in the pull down list, it can be added using the "Add New Parameter" button. The Add Parameter window will be displayed as shown in the following figure.



Enter the Parameter and the optional Description. Press Ok to create the Parameter and it will be populated in the Parameter text field as well. Press Cancel to close the Add Parameter window without creating a parameter.

If the parameter entered on the Add Parameter window already exists, you will see the following message. Press OK to close this message window and either change the name of the parameter and press Ok on the Add Parameter window or press Cancel on the Add Parameter window and select the desired Parameter from the pull down list.



7.3 Modify Artifact (Contributor Role)

To modify an Artifact, select the Artifact you wish to modify and press the "Modify Artifact" button. This button is found below the Artifacts table and next to the "Add New Artifact" button. The Modify Artifact page will be displayed and it will be populated with the data of the Artifact that was selected. This page looks the same as the Add Artifact page but with the data populated. The Modify Artifact page is shown in the following figure.

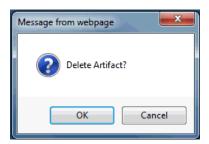
UKUSHIN	IA DAIICHI	ACCIDENT S	TUDY INFO	RMATIO	N PORTAL	Welcome che ! [<u>Log C</u> <u>Change Passw</u>
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NOTE: Paramete	er will NOT reflect a c	late/time until associa	ted with an Event.			
Modify Artifact	Cancel					
ERSION 1.0.22	DEVELOPED ANI	MAINTAINED AT TH	E IDAHO NATIONA	L LABORATORY	(INL).	
			SEND A	NY PROBLEM	REPORTS OR SUGGEST	IONS TO THE <u>PORTAL ADMINISTRA</u>

Modify the desired information and press the "Modify Artifact" button to return to the Artifacts page or press the "Cancel" button to return to the Artifacts page without saving any changes. Note that the Artifact Type cannot be changed. If the Artifact was created as the wrong type, the Artifact must be deleted and recreated. In addition, for a Parameter Artifact, the Area, Parameter, and Measurement cannot be modified. If these were entered incorrectly, the Artifact must be deleted and recreated. Similarly, for a Component State Parameter, the Area, System, Component Type, and Component cannot be changed. If these were entered incorrectly, the Artifact must be deleted and recreated. The NOTE: in red indicates that this parameter has not been associated with an event and therefore will not have a date/time associated with it for graphing. When modifying parameters that are associated with an event, this message will not be displayed.

7.4 Delete Artifact (Contributor Role)

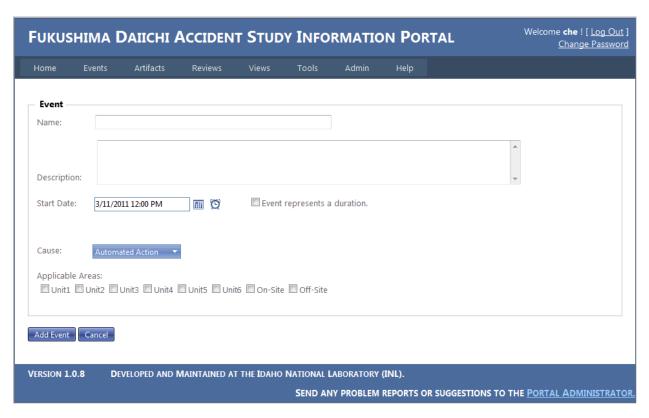
To delete an Artifact, select the Artifact and press the "Delete Artifact" button. This button is below the Artifacts table after the "Modify Artifact" button. Deleting an Artifact will delete the Artifact and any associations to Events or Reviews. It will not

remove the Events or Reviews to which it was associated. Once the delete button is pressed, a confirmation window will be displayed. Press "OK" to delete the Artifact or "Cancel" to leave the Artifact intact.



7.5 Add Associated Event (Contributor Role)

The "Add Associated Event" button will create a new Event and associate it with the Artifact currently selected in the Events table. This button is found below the Associated Artifacts table on the Events page. Pressing this button will display the Add Event page as shown in the figure below. See the Add Event section for specific instructions on creating Events.

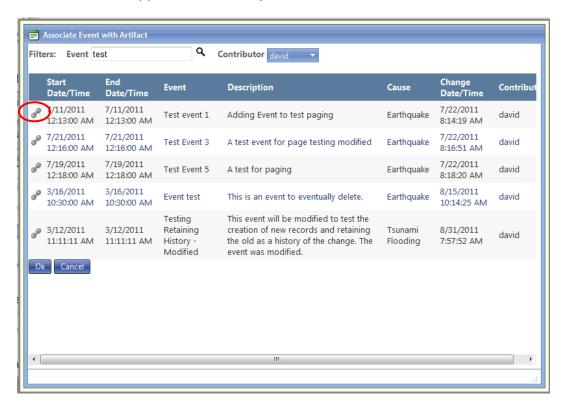


Once the data for the Event is added, press the "Add Event" button to create the Event and the association. The Artifacts page will then be displayed. Pressing the

"Cancel" button will return to the Artifacts page without creating an Event or an association. For Associate an Existing Event

To associate an existing Event to the currently selected Artifact, press the "Associate an Existing Event" button. This button is found below the Associated Events table next to the "Add Associated Event" button. Pressing this button will display a window with all the available Events as shown in the figure below with the link icon circled.

Because of the large number of Events in the system it may be difficult to find a specific Event so the Events can be filtered by Event (name) and/or Contributor. The users who have created Events are listed in the Contributor pull down and selecting one will display only those Events created by that user. The Event filter will display any Events that contain the search text entered in the text box. Once the text is entered, either press Enter or press the Search icon and the filter will be applied. The Event filter may contain multiple words and spaces, but is case insensitive. The two filters will be applied cumulatively if both are entered.



Note that any Event that has already been associated with the selected Artifact will not appear in the list. To associate or link the Event press the "link" icon and the selected Event will be associated to the selected Artifact. The Event will be displayed in the Associated Events table as show in the figure below.

Associated Events for Artifact: Parameters Taken Start Date/Time End Date/Time Name Change Date Contributor 8/11/2011 8/11/2011 Unit 1 and 2 reacters 7/12/2011 Reactor Automated david 10:23:44 AM 10:24:05 AM Shutdown 12:06:43 PM shutdown as expected Action Add Associated Event | Associate an Existing Event

7.6 Delete Event Association (Contributor Role)

To delete the association between and Artifact and an Event, press the eraser icon next to the associated Event. The figure below shows the Associated Events table with the eraser icon circled.

Associated Events for Artifact: Parameters Taken Start Date/Time End Date/Time **Change Date** Contributo <u>Name</u> Description Cause 8/11/2011 8/11/2011 Reactor Unit 1 and 2 reacters 7/12/2011 Automated david 10:23:44 AM 10:24:05 AM Shutdown shutdown as expected Action 12:06:43 PM Add Associated Event Associate an Existing Event

NOTE: Pressing this icon will delete the association between the Artifact and the Event but it will not delete the Event itself. No confirmation will be presented: the association will simply be deleted. The Event will once again appear in the list of Events to be associated with this Artifact and can be associated again if desired.

7.7 Open Associated Event

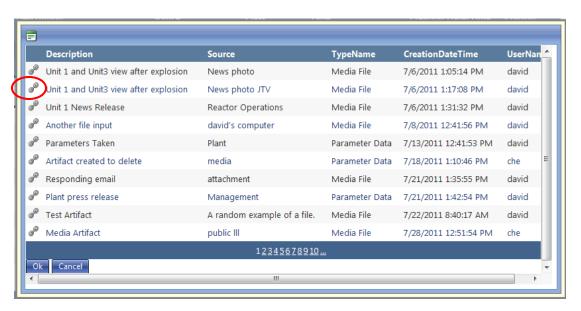
To open an Event from the Associated Events table, press the open icon next to the associated Event. The figure below shows the Associated Events table with the open icon circled.

Associated Events for Artifact: Parameters Taken Start Date/Time End Date/Time Name Description Cause **Change Date** Contributor 8/11/2011 8/11/2011 Reactor Unit 1 and 2 reacters 7/12/2011 Automated david 10:23:44 AM 10:24:05 AM Shutdown shutdown as expected 12:06:43 PM Action Add Associated Event Associate an Existing Event

Selecting the open icon will take you to the Events page with the desired Event selected. Please see the Events section for more information.

7.8 Associate an Existing Artifact (Contributor Role)

An Artifact can be associated to another Artifact. Both Artifacts must exist to create the association. Select one of the Artifacts to be associated and press the "Associate an Existing Artifact" button which is found in the Associated Artifacts area of the screen (below the Selected Artifact Details). Pressing this button will display a window with all the available Events as shown in the figure below with the link icon circled.



Note that any Artifact that has already been associated with the selected Artifact will not appear in the list. To associate or link an Artifact press the "link" icon next to the desired Artifact and it will be associated to the selected Artifact. The Artifact will be displayed in the Associated Artifacts table as show in the figure below.



7.9 Delete an Associated Artifact (Contributor Role)

To delete the association between two Artifacts, press the eraser icon next to the associated Artifact. The figure below shows the Associated Artifacts table with the eraser icon circled.



NOTE: Pressing this icon will delete the association between two Artifacts but it will not delete either of the Artifacts. No confirmation will be presented: the association will simply be deleted. The Artifact will once again appear in the list of Artifacts to be associated with this Artifact and can be associated again if desired.

7.10 Open an Associated Artifact

To open an Artifact from the Associated Artifacts table, press the open icon next to the associated Artifact. The figure below shows the Associated Artifacts table with the open icon circled.

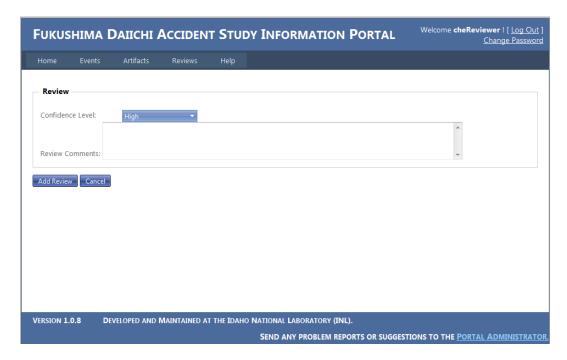


Selecting the open icon will take you to the Artifacts table (at the top of this page) with the desired Artifact selected.

7.11 Add Associated Review (Reviewer Role)

Only users with the "Reviewer" role will see the "Add Associated Review" button.

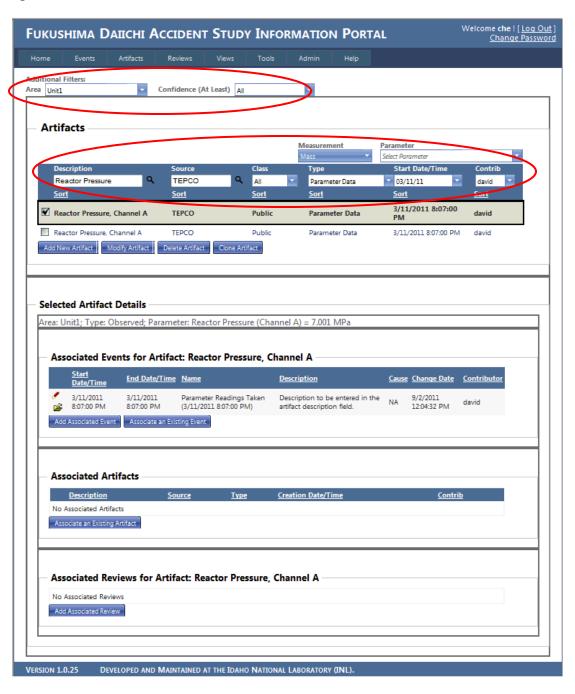
The "Add Associated Review" button will create a new Review and associate it with the Artifact currently selected in the Artifacts table. This button is found below the Associated Reviews table on the Artifacts page. Pressing this button will display the Add Review page as show in the figure below.



Once the data for the Review is added, press the "Add Review" button to create the review and the association. You will then be returned to the Artifacts page. Pressing cancel will return to the Events page without creating a Review or an association. For more information about adding Reviews, see the Add Review section.

7.12 Artifact Filtering

There may be a large number of Artifacts entered in the system. Artifact filtering is provided to assist the user in displaying a manageable subset of all the Artifacts in the system. The first time a user visits the Artifacts page, the Area filter will be set to "Unit1" and the Artifact Type filter will be set to "Media File." The global filters refer to filters that utilize data not displayed with the individual Artifacts. The table filters refer to data displayed in the Artifacts table. The filters are displayed in the following figure.



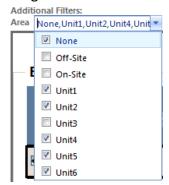
7.12.1 Global Filters

Global filters for Artifacts include Area and Confidence. These filters are displayed as "additional Filters above the Artifacts table as shown in the following figure.

When parameter Artifacts and component state Artifacts are created, an area for the parameter is selected. When the Area filter is selected, only parameters that were assigned the Area(s) selected in the filter are displayed. Media Artifacts do not have a specific area assigned to them. However, if the media artifact is associated to an event, the event may have one or more areas assigned. If the media artifact is associated with an Event and the associated Event has the selected Area(s) assigned to it, then the artifact will be displayed when filtering for that Area(s).

The Area filter allows for multiple selections. Click on the pull-down arrow (circled below on the right) and select the checkbox next to any of the areas you wish to include in the filter. The figure on the left shows multiple areas selected. To close the list of areas, click on the pull-down arrow again or simply click anywhere outside the pull-down box. The selected areas will appear in the text portion of the field as shown in the figure on the right. If there are too many selections to see all of them in the text portion of the field, click on the arrow to activate the pull-down and all of the selected items will be checked.

None in the Area filter indicates that the filter will display Artifacts that have no Area assigned to them.





The confidence filter will display any Artifacts that have associated Reviews of at least the selected value. For example, if Medium is selected any Artifacts with Reviews of confidence level Medium or High. If an Artifact has even one associated Review with a lower confidence Review, it will not be displayed by the filter. If an Artifact does not have any Reviews associated then it will not be displayed by the filter unless "All" or "Not Reviewed" is selected.

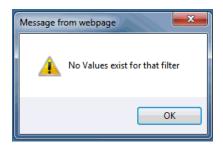
Global filters can be used in conjunction with Table filters.

7.12.2 Table Filters

The table filters for Artifacts include Class, (Artifact) Type, Creation Date/Time, Contributor, Description, and Source. The pull down list for each of the filters will contain all of the valid values for that filter. Selecting a value from a filter will display only the values that match that filter. For example, selecting a Creation Date/Time will display only Artifacts that were created at that same Date/Time. The Artifact Type filter allows multiple selections. See the Area filter in the Global Filter section above for a description of how the multiple selection works. Multiple filters can be selected simultaneously and the filter is applied cumulatively. For example, if the contributor is selected all Artifacts created by that contributor will be displayed. If the Creation Date/Time is then selected, all Artifacts created by that contributor with that Creation Date/Time will be displayed. If the contributor is then changed to another contributor, All Artifacts created by the newly selected contributor with the selected Creation Date/Time will be displayed. If the contributor was set back to "All" then all Artifacts with the selected Creation Date/Time will be displayed.

The Description and Source filters are slightly different as they use a text search rather than a selection search. The user enters the desired text in the Description or Source text box (or both, if desired) and then presses return or the search icon and the filter is applied. The filter searches for any Descriptions (or Sources, if applicable) that contain the entered text. Note that spaces can be entered, but the search is not case sensitive. Wild carding is not supported. The Description and Source filters can be used in conjunction with all the other filters so when they are applied, any other filters are also applied.

If a selected filter results in no data the following message will be displayed and the filter that caused the message will be set back to its previous value and the Artifacts displayed will remain the same.



If a filter is selected and then the user navigates away from the page, the same filters will still be applied when returning to the page. For example, if a filter is selected and then the user selected the Events or the Review page, then returns to the Artifacts page, the same filter will be applied. Similarly, if a filter is applied and

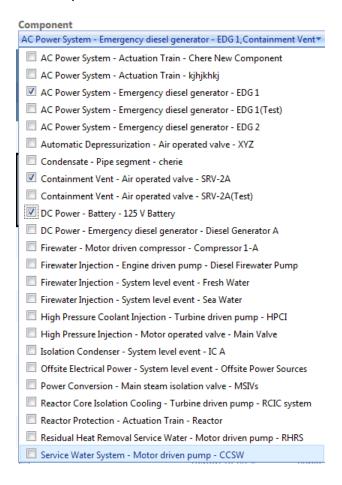
the user adds or modifies an Artifact, the same filter will be applied when the user completes or cancels the action.

There are two exceptions. If the user selected the <u>Details</u> link from the Recent Additions/Changes table on the Welcome page, all filters will be reset to "All" except the Area and the Artifact Type. The Area and the Artifact type will be set appropriately for the given Artifact and all Artifacts satisfying the filter will be displayed with the chosen Artifact selected. Similarly, if the user is on the Events page and selects the open icon of an associated Artifact, all filters will be set to "All" except the Area and the Artifact type and all Artifacts satisfying the filter will be displayed with the chosen Artifact selected.

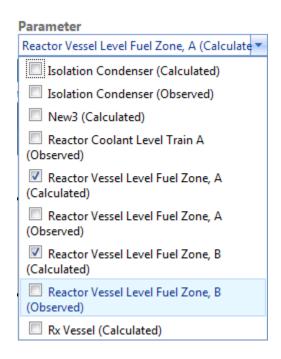
A couple of special filters are also available. The Component filter is visible only if Component State artifacts are selected in the Type filter. The Measurement and Parameter filter are visible only if Parameter Data artifacts are selected in the Type filter. The filters can be used together or separately. The following figure shows the additional fields that are displayed when the both artifact types are selected.



The Component pull down menu lists the available combinations of System – Type – Component in alphabetically order. One or more systems can be selected and the table will display only the Component State Artifacts that represent the selected System(s). The following figure shows an example of the Component List with several systems selected.



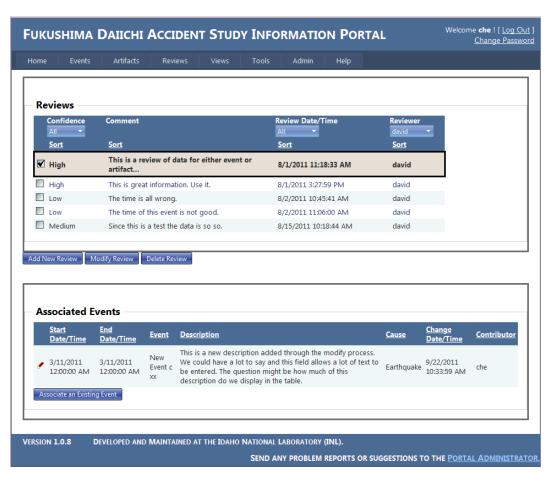
The Measurement pull down menu lists the available measurements. When a measurement is selected, the Parameter pull down menu is then populated with the available Parameters and Sensors (if applicable) and whether the parameter is observed or calculated data. One or more Parameters can be selected and the table will display only the Parameter Artifacts that represent the selected Parameters. The following figure shows an example of a Parameter list for a given Measurement.



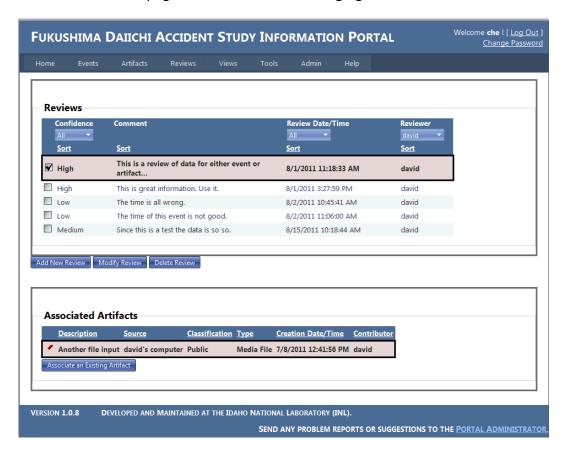
The Component filter and the Parameter filter can be used combined with each other and/or can be combined with the Media filter.

8. Reviews (Reviewer Role)

Reviews are available for viewing and modification to the Reviewer role. Reviews comment on the validity of data entered into the system. A review can be associated to one or more Events, to one or more Artifacts, to both Artifact(s) and Event(s), or to nothing. Reviews can be viewed via the Event Reviews menu or the Artifact Reviews menu option. All the reviews are displayed on both pages. The difference is that the Event Review page shows Reviews and associated Events while the Artifact Review page shows Reviews and associated Artifacts. The Event Review page is shown in the following figure.



The Artifact Review page is shown in the following figure.



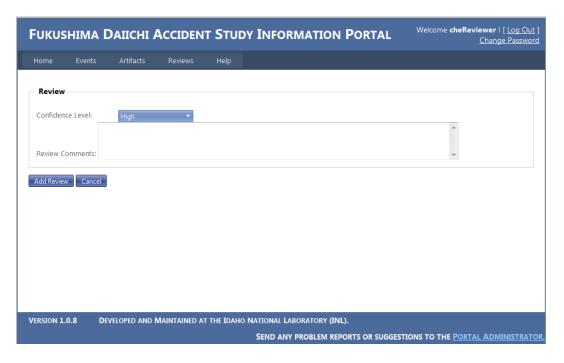
8.1 Select a Review

To select a Review, click the check box on the row of the Review you wish to select. The following figure shows The Reviews table a Review selected and the check box circled.



8.2 Add New Review

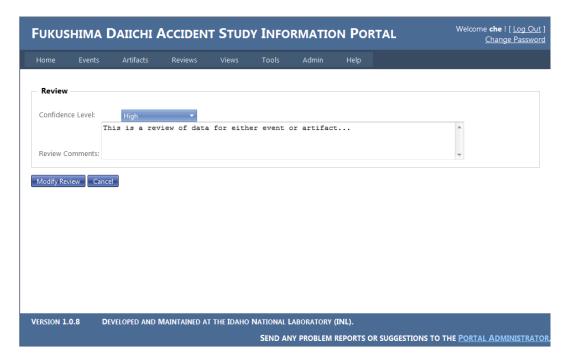
The Add New Review button is below the Reviews table. Press the "Add New Review" button and Add Review page will be displayed as shown below.



The Confidence Level can be selected from the pull down menu and the comments are free text. Both must be entered. Press "Add Review" to create the review and return to the Review page or press "Cancel" to return to the Review page without saving any data. Reviews will be shown on both the Artifact Review page and the Event review page regardless of which page was used to add the Review.

8.3 Modify Review

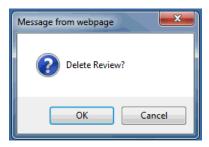
To modify a review, select the desired Review and press the "Modify Review" button. The Modify Review page will be displayed with the Review data populated as shown in the figure below.



Make the desired changes and press the "Modify Review" button to save the changes and return to the Review page or press "Cancel" to return to the Review page without saving any changes. Any changes made will be displayed on both the Artifact Review page and the Event Review page regardless of which page was used to make the changes.

8.4 Delete Review

To delete a Review, select the Review and press the "Delete Review" button. This button is below the Reviews table after the "Modify Review" button. Deleting a Review will delete the Review and any associations to Events or Artifacts (regardless of which page was used to delete the Review). It will not remove the Events or Artifacts to which it was associated. Once the delete button is pressed, a confirmation window will be displayed. Press "OK" to delete the Review or "Cancel" to leave the Review intact.



8.5 Associate Event / Artifact

The following instructions describe how to associate an existing Event to a Review. The instructions to associate an existing Artifact to a Review are exactly the same except the steps begin at the Artifacts Review page rather than the Events Review page. To associate an existing Event to the currently selected Review, press the "Associate an Existing Event" button. This button is found below the Associated. Pressing this button will display a window with all the available Events as shown in the following figure with the link icon circled.

Because of the large number of Events in the system it may be difficult to find a specific Event so the Events can be filtered by Event (name) and/or Contributor. The users who have created Events are listed in the Contributor pull down and selecting one will display only those Events created by that user. The Event filter will display any Events that contain the search text entered in the text box. Once the text is entered, either press Enter or press the Search icon and the filter will be applied. The Event filter may contain multiple words and spaces, but is case insensitive. The two filters will be applied cumulatively if both are entered.



Note that any Event that has already been associated with the selected Review will not appear in the list. To associate or link the Event press the "link" icon and the

selected Event will be associated to the selected Review. The Event will be displayed in the Associated Events table as show in the figure below.

Associated Events Event Description Cause Contributor Date/Time This is a new description added through the modify process. We could have a lot to say and this field allows a lot of text to 3/11/2011 3/11/2011 Earthquake 9/22/2012 10:33:59 AM 9/22/2011 Event c be entered. The question might be how much of this 12:00:00 AM 12:00:00 AM description do we display in the table. Associate an Existing Event

8.6 Delete Review Association

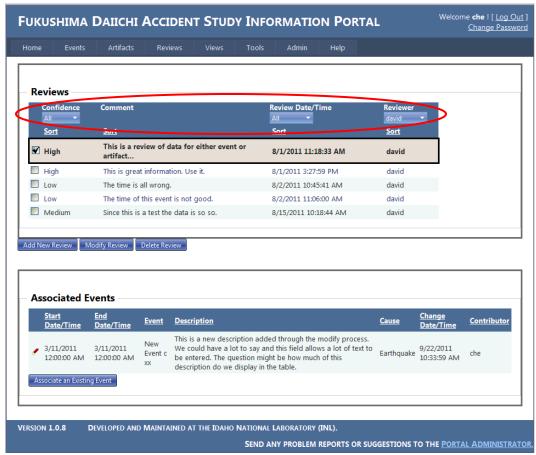
The following instructions describe how to delete an association between a Review and an Event. The instructions to delete an association between a Review and an Artifact are exactly the same except the steps begin at the Artifacts Review page rather than the Events Review page. To delete the association between a Review and an Event, press the eraser icon next to the associated Event. The figure below shows the Associated Events table with the eraser icon circled.



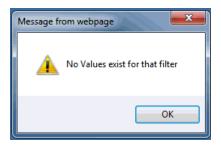
NOTE: Pressing this icon will delete the association between the Review and the Event but it will not delete the Event itself. No confirmation will be presented: the association will simply be deleted. The Event will once again appear in the list of Events to be associated with this Review and can be associated again if desired.

8.7 Review Filtering

There may be a large number of Reviews entered in the system. Filtering is provided to assist the user in displaying a manageable subset of all the Reviews in the system. The filters are displayed in the following figure.



Reviews can be filtered by Confidence, Review Date/Time, and Reviewer. The pull down list for each of the filters will contain all of the valid values for that filter. Selecting a value from a filter will display only the values that match that filter. For example, selecting a Review Date/Time will display only Reviews that were reviewed (created) at that same Date/Time. Multiple filters can be selected simultaneously and the filter is applied cumulatively. For example, if the Reviewer is selected all Reviews created by that Reviewer will be displayed. If the Review Date/Time is then selected, all Reviews created by that Reviewer with that Review Date/Time will be displayed. If the Reviewer is then changed to another reviewer, all Reviews created by the newly selected reviewer with the selected Review Date/Time will be displayed. If the reviewer was set back to "All" then all Reviews with the selected Review Date/Time will be displayed. If a selected filter results in no data the following message will be displayed and the filter that caused the message will be set back to its previous value and the Reviews displayed will remain the same.



If a filter is selected and then the user navigates away from the page, the same filters will still be applied when returning to the page. For example, if a filter is selected and then the user selected the Events or the Artifacts page, then returns to the Review page, the same filter will be applied. Similarly, if a filter is applied and the user adds or modifies an Review, the same filter will be applied when the user completes or cancels the action.

There is one exception. If the user selected the <u>Details</u> link from the Recent Additions/Changes table on the Welcome page, all filters will be reset to "All" and all Reviews will be displayed with the chosen Review selected.

9. Views (User Role)

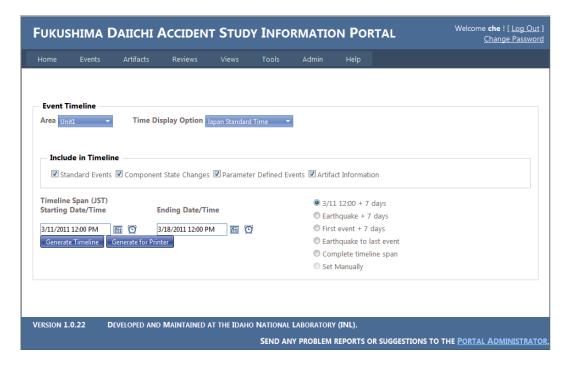
The Views menu is being further developed. Currently there are 7 different views but these may change as development continues.

9.1 Event Timeline

The Event Timeline displays the dates of the existing events and additional information that can be selected or deselected. The additional information includes Standard Events (i.e. events with either Media artifacts associated or no artifact associated), Component State Change Events, Parameter Defined Events, and Artifact Information.

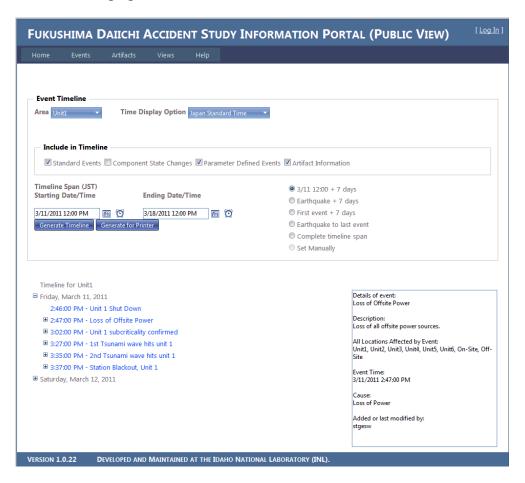
There are also some standard selections for setting the Timeline Span. The selections are from 3/11 at 12:00 pm plus seven days, from the time of the earthquake plus seven days, from the date/time of the first event in the database plus seven days, from the time of the earthquake to the date/time of the last event in the database or the complete timeline which will include the earliest date/time in the database to the last date/time in the database. In addition, any specific start and end date/times can be entered directly into the start and end fields.

Once the desired selections have been made and the Timeline Span for the Chart has been entered, press the Generate Timeline button.



The timeline will be generated as shown below. Each date can be expanded by pressing the "+". The following figure shows an example of what the view might look like when the page displayed and one of the dates has been expanded.

Within each date the time of the event is listed the Component or Parameter information depending on the options selected and the type of event. By clicking on (i.e. selecting) an event, the event details show in the Details box at the right as shown in the following figure.



9.1.1 Event Timeline Printing

To print the event timeline, press the "Generate for Printer" button. Another browser window will be opened with the timeline expanded and the browser Print dialog displayed as shown in the figure below. Use the browser print capability to print the information.



Either print the page or cancel the Print dialog to see the expanded timeline in the new window as show in the figure below. When finished with this view, it is recommended that the browser window be closed. Each time the Generate for Printer button is pressed, a new browser window will be opened.

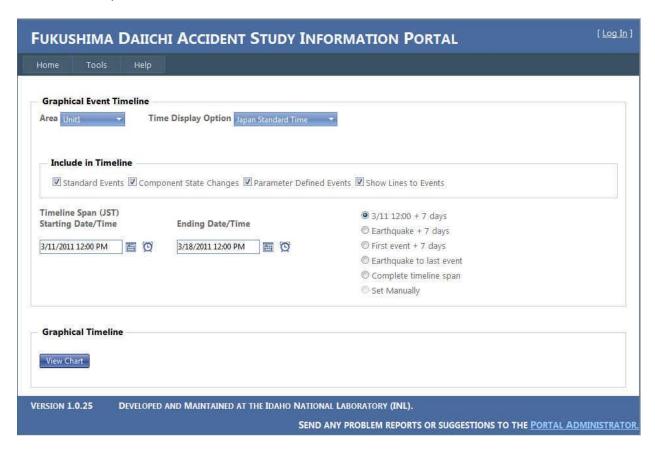
```
## http://fish:8115/TreePrint.aspx
Timeline for Unit1
Friday, March 11, 2011
   12:00:00 PM - ACP/ACT/Chere New Component, Standby
   12:00:00 PM - ACP/ACT/Chere New Component, Normally closed; fail in the closed position 12:00:00 PM - New event for testing session values
      Isolation Condenser (at Unit1) reading 100 m
      URL: fukushima.inl.gov
   12:00:00 PM - Event for testing modification.
12:20:00 PM - CVS/AOV/SRV-2A, Normally closed; fail in the closed position
   12:20:00 PM - CVS/AOV/SRV-2A, Normally closed; fail in the closed position
   12:20:00 PM - CVS/AOV/SRV-2A, Normally closed; fail in the closed position
   12:20:00 PM - CVS/AOV/SRV-2A, Normally closed; fail in the closed position
   12:36:00 PM - ACP/ACT/kjhjkhkj, Human error failure
      File: Unit 1 and 3 after explosions.jpg
   2:14:14 PM - Power Interupted (Initiated)
      File: Unit 1 and 3 after explosions.jpg
      Isolation Condenser (at Unit1) reading 655.5 C
      Isolation Condenser (at Unit1) reading 444 C
   2:46:00 PM - ACP/DGN/EDG 2, Automatically Started
   2:46:00 PM - ACP/DGN/EDG 1, Automatically Started
  2:46:00 PM - Earthquake at Sanriku-Oki
```

9.2 Graphical Timeline

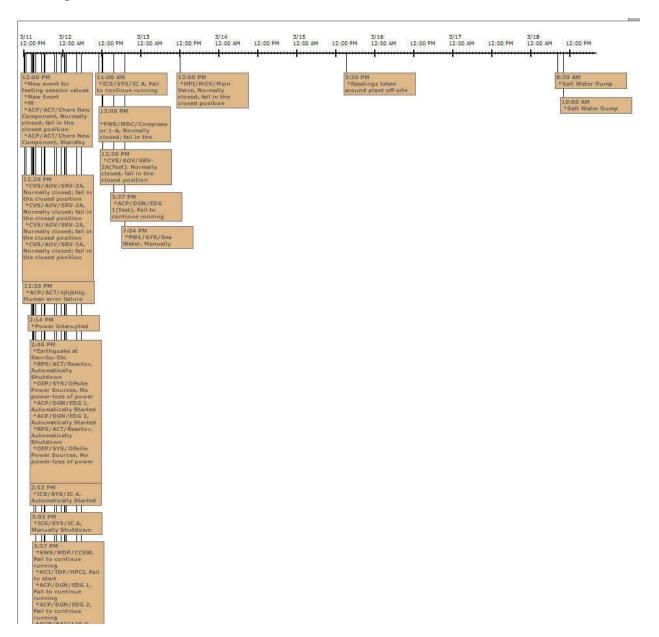
The Graphical Timeline is very similar to the Event Timeline except that it displays graphical representation of the existing events as well as additional information that can be selected or deselected. The additional information includes Standard Events (i.e. events with either Media artifacts associated or no artifact associated), Component State Change Events, Parameter Defined Events, and whether to show lines from the timeline to the events.

There are also some standard selections for setting the Timeline Span. The selections are from 3/11 at 12:00 pm plus seven days, from the time of the earthquake plus seven days, from the date/time of the first event in the database plus seven days, from the time of the earthquake to the date/time of the last event in the database or the complete timeline which will include the earliest date/time in the database to the last date/time in the database. In addition, any specific start and end date/times can be entered directly into the start and end fields

Once the desired selections have been made and the Timeline Span for the Chart has been entered, press the View Chart button.



The timeline will be generated as shown below. Each event at a specific time will be shown in the same box. For example, there are several events that occurred at 12:00 PM on 3/11. The boxes with event information extend downward until enough time has passed to allow an event box to be placed next to the event box. The lines that are drawn from the timeline to the boxes are optional and can be removed by not checking the "Show Lines to events."



The greater the time span (number of days) of the timeline, the further down the events may have to extend to show all of the events. A shorter time span may lessen the vertical length of the chart.

To print the chart, simply right-click anywhere within the chart and select "Print Chart" from the menu as shown below.



After the chart was generated by pressing the "View Chart" button, an additional "Save" button was displayed beneath the "View Chart" button as shown in the figure below. Notice that the "Save" button is disabled. In addition to the "Save" button, there are instructions for how to print the chart and how to save the chart.



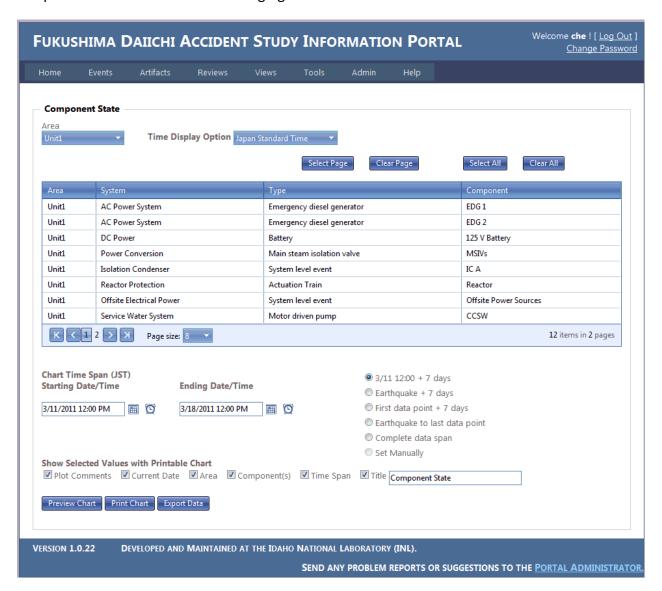
The chart can be saved as a JPEG or PNG image or as a PDF, but it is a multistep process. To save the chart, right-click anywhere within the chart and select the appropriate "Save as" option. The chart will then turn gray, indicating that it is disabled and a progress window will be displayed as shown below.



Once the capture is completed, the chart will be enabled and the "Save" button shown in the figure above will also be enabled. Press the "Save" button and a browse window will be displayed allowing a file name and location on the local system to be entered. The default name of the file is "FusionCharts" and the extension will match the "Save as" option that was selected. (I.e. png for PNG, .jpg for JPEG, or .pdf for PDF.)

9.3 Component State Chart

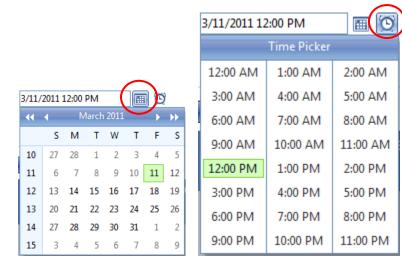
The Component State chart allows the user to select a time span, area, and various components as shown in the following figure.



When an Area is selected from the list, The Components associated with that Area are displayed in the table. The desired Components are then selected. If there are a large number of Components, the user can use the buttons to Select and Clear All or to Select and Clear a page. The page size (number of rows shown at a time in the table) is also adjustable.

In addition, a start and end date/time can be selected for use in generating the chart. There are several methods of setting the date/time. There are several predefined time spans to the right of the Time Span which will automatically populate the time

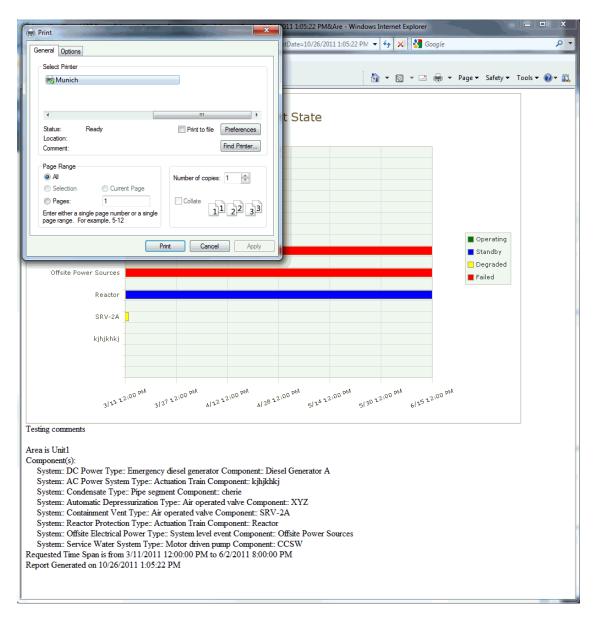
span when selected. Alternatively, when the calendar button is selected (circled below left), a calendar will pop up to assist in the selection of the date as shown in the figure on the left. Similarly, when the clock button (circled below right) is selected, a Time Picker will help select the time as shown in the picture on the right. Only the top of the hour is displayed in the time picker. Once the hour is selected the minutes in the text box can be modified. Alternatively, you can skip the buttons and type directly in the date/time text box.



There are several check boxes below the Time span under the title "Show Selected Values with Printable Chart." If these values are all desired on the printed chart, then leave them checked. They can be added and removed as desired. The title of the will be printed as entered in the text box if the Title check box is checked.

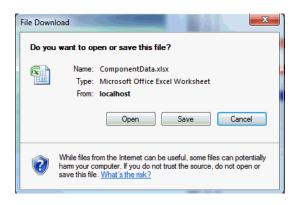
Once all the selections are made, the user can press the "Preview Chart" button to display the chart in the same browser window. This gives the user a chance to look at the chart and make adjustments to selections. With the exception of the Title, the checked values under "Show Selected Values with Printable Chart" will not show on the Preview.

To print the chart, press the "Print Chart" button. The chart is displayed in a new browser window with the browser's Print dialog displayed as shown in the following figure. After setting the Print preferences, press the "Print" button or press "Cancel" to skip printing. To return to the selection page, print or cancel the print dialog and close the browser window.



NOTE: a new browser window will be opened every time the "Print Chart" button is pressed. It is a good idea to close the browser window when it is no longer needed.

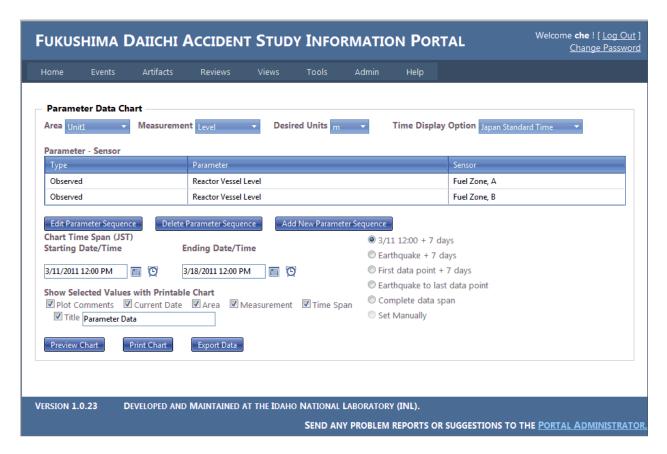
The "Export Data" button will save the data that is used to create the chart to an Excel spreadsheet. Once the button is pressed, the following dialog will be displayed.



Press "Open" to open the Excel with the spreadsheet displayed. The file will be displayed in a temporary directory. Excel can then be used to save the spreadsheet in the appropriate location, if desired. Press "Save" to browse to a location on your local machine and save the file without viewing it.

9.4 Parameter Data Chart

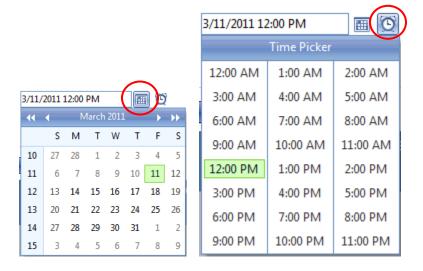
The Parameter Data chart allows the user to display parameter data based on the selection of an Area, Measurement, Parameter, Time Display Options and Time Span as shown in the following figure. The Parameter – Sensor table is populated based on the Area and the Measurement selected. Up to 11 Parameter – Sensors can be selected. The Desired Units pull down shows units applicable to the selected Measurement and can also be selected. The graph will be displayed with the selected units in the Y-axis.



Below the Parameter - Sensor table are buttons for editing, deleting, and creating parameter sequences. (These buttons will only be displayed for users with the appropriate roles.) This functionality is discussed following the discussion generating the data chart.

The time display options allow the user to select Japan Standard time, which displays the dates and times on the X axis of the chart as though they were Japan time. Universal time also displays dates and times on the x axis but as though they were entered in Universal time. The Time from Earthquake option displays the number of hours from the time of the earthquake on the x axis rather than the date and time.

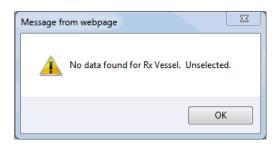
There are several methods of setting the date/time for the time span of the chart. There are several predefined time spans to the right of the Time Span fields which will automatically populate the time span fields when selected. Alternatively, when the calendar button is selected (circled below left), a calendar will pop up to assist in the selection of the date as shown in the figure on the left. Similarly, when the clock button (circled below right) is selected, a Time Picker will help select the time as shown in the picture on the right. Only the top of the hour is displayed in the time picker. Once the hour is selected the minutes in the text box can be modified. Alternatively, you can skip the buttons and type directly in the date/time text box.



There are several check boxes below the Time span under the title "Show Selected Values with Printable Chart." If these values are all desired on the printed chart, then leave them checked. They can be added and removed as desired. The title of the will be printed as entered in the text box if the Title check box is checked.

Once all the selections are made, the user can press the "Preview Chart" button to display the chart in the same browser window. This gives the user a chance to look at

the chart and make adjustments to selections. If any of the selected parameters don't have data for the time span selected, a message will be displayed, the parameter will be unselected from the table, and the parameter will not appear on the chart. The following figure shows an example message.

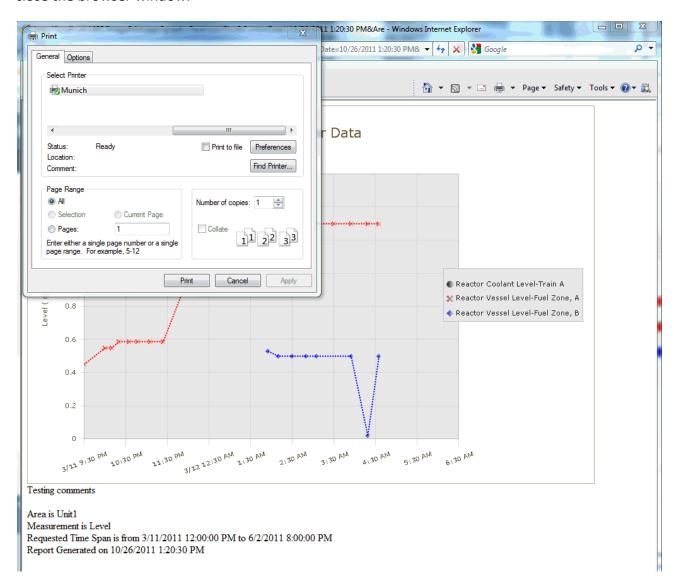


With the exception of the Title, the checked values under "Show Selected Values with Printable Chart" will not show on the Preview. The following figure shows an example of a Preview Chart.



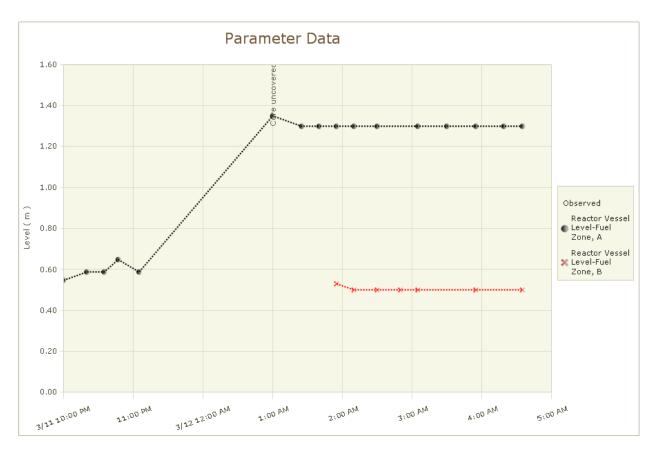
To print the chart, press the "Print Chart" button. The chart is displayed in a new browser window with the browser's Print dialog displayed as shown in the following figure. After setting the Print preferences, press the "Print" button or press "Cancel"

to skip printing. To return to the selection page, print or cancel the print dialog and close the browser window.

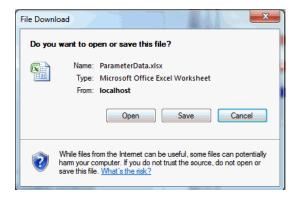


NOTE: a new browser window will be opened every time the "Print Chart" button is pressed. It is a good idea to close the browser window when it is no longer needed.

The chart displayed in the figure below, the legend on the right indicates the parameter and the color of the plot representing that parameter. Notice the comment near the top of the chart. These are comments that can be turned on or off using the "Plot Comments" check box under Show Selected Values with Printable Chart. These commented can be added or edited as described in the next section.



The "Export Data" button will save the data that is used to create the chart to an Excel spreadsheet. Once the button is pressed, the following dialog will be displayed.

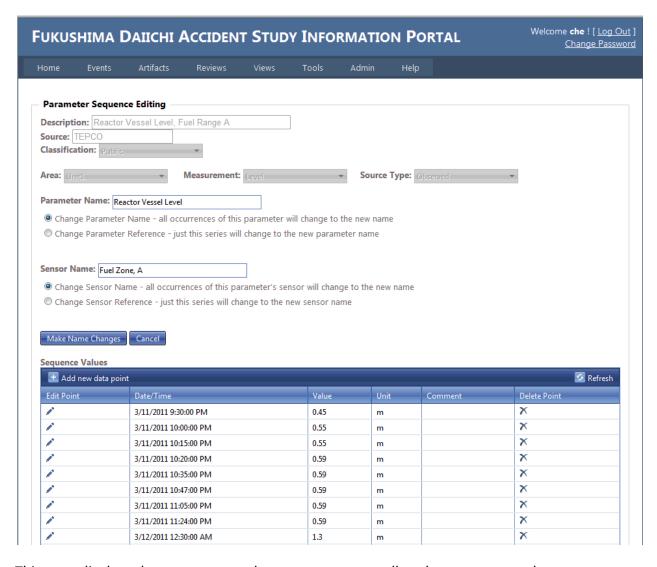


Press "Open" to open the Excel with the spreadsheet displayed. The file will be displayed in a temporary directory. Excel can then be used to save the spreadsheet in

the appropriate location, if desired. Press "Save" to browse to a location on your local machine and save the file without viewing it.

9.4.1 Editing Parameters within the Parameter Data Chart

Parameter data can be modified, deleted or created from this screen. Selecting a parameter on the Parameter Data Chart screen and then pressing the "Edit Parameter Sequence" button will allow the user to edit parameters using the page displayed below.



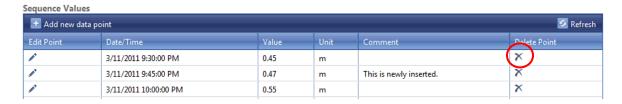
This page displays the parameter and sensor names as well as the parameter values. In the upper portion of the screen, the Parameter Name and the Sensor Name can be changed. Changing the Parameter Name (all occurrences) will change the name of the parameter and any occurrences for this parameter, including for every unit and sensor, will reflect the new name. Changing the Parameter Reference (just this series) indicates that just this series of the parameter will be updated and if the new

parameter name does not exist it will be created. All the occurrences for the original parameter for other units and sensors will reflect the original name. Changes to the Sensor name are handled in a similar manner. Changes made to the parameter or sensor name will not be saved to the database until the "Make Name Changes" button is pressed and the screen returns to the Parameter Data Chart screen.

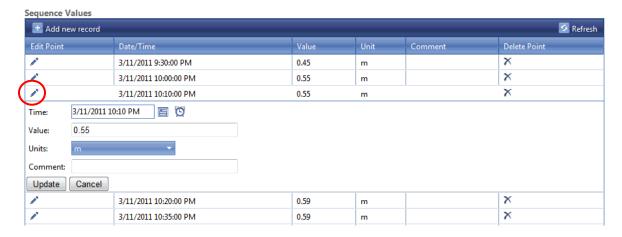
New measurements can be added from this screen by clicking the Plus sign next to the Add new record button (circled in the figure below). An area for entering new values will be displayed in the table as shown in the figure below. Enter the appropriate values and press Insert to create the new data. The new data will be displayed in the appropriate location within table which is sorted by Date/Time.



To delete a value from the table, simply select the "X" in the Delete Point column of the row to be deleted as shown in the following figure.

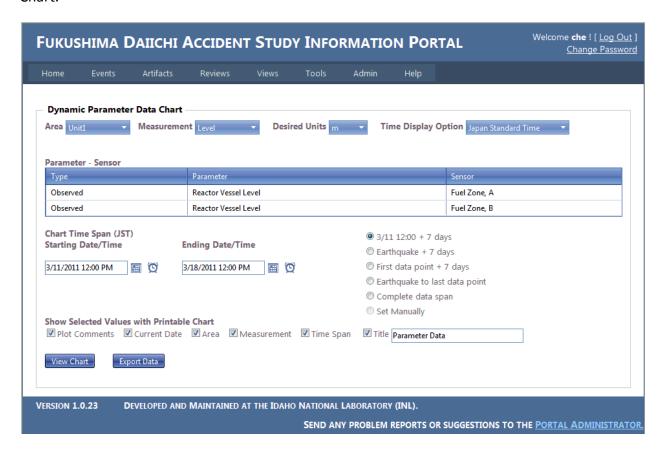


All of the values for the parameter can also be edited. To modify these values, select the "Edit Value" icon for the row to be modified (circled below) and editable fields for that row will be displayed as shown in the following figure. If no other artifacts are associated with the event, then modifying the Date/Time will change the event itself. If any other parameters are associated with the same event then a new event will be created and only the edited parameter will be associated with the new event. When the desired changes have been made press the "Update" button and the changes will be saved to the database and displayed in the table.

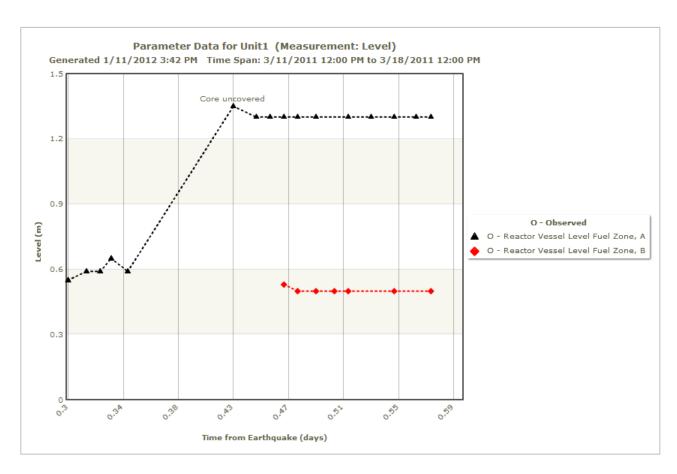


9.5 View Dynamic Parameter Data Chart

The dynamic parameter data chart is very similar to the previously described data chart. Parameter editing is not provided on this form and the functionality and appearance of the chart itself are slightly different as a different charting tool was used. The following figure shows the screen for displaying a Dynamic Parameter Data Chart.



The user can select the Unit, Measurement, Desired Units, and Time Display Option. The any of the Parameters/Sensors can be selected from the table, up to 11 selections. Finally, setting a time span for the chart and optional values to be displayed with the chart and pressing the "View Chart" button will display the chart in the bottom portion of the screen as shown in the figure below.

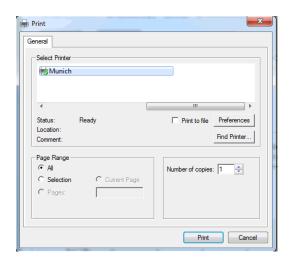


The values displayed will be the same as the values displayed with the non-dynamic data chart if all the same options are selected. Some of the appearance differences include the symbols used for points on the chart (the colors are the same), the text in the legend, the title of the charts, the shading of the chart background, and the display of plot comments. The dynamic chart includes the measurement in the title as well as a subtitle where the other chart simply includes the text from the Title box (if that option is selected). The non-dynamic chart includes the information from the subtitle in text below the chart. The dynamic chart will display any appropriate plot comments next to the point the comment pertains to where the other chart displays all plot comments below the chart.

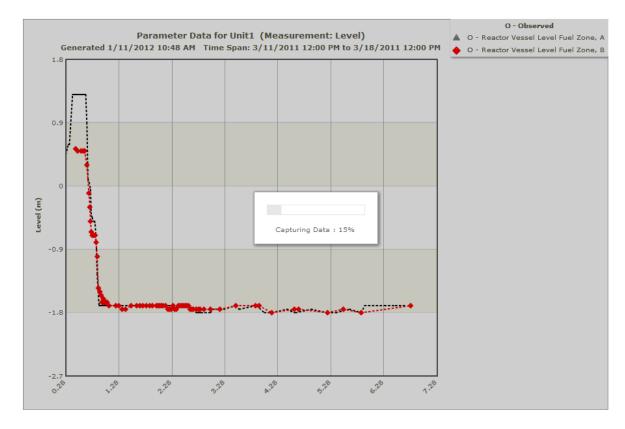
There are several functional differences in the charts. The legend for this chart can be moved anywhere within the box surrounding the chart by clicking on it and dragging it to the desired location. Selecting an item in the legend will toggle off the points for the series selected. The dashed line will remain but removing the points may make it easier to see points in another series if they are overlapping. Simply select the series again to redisplay the points.

Printing and saving the chart are also a little different. To print the chart, simply right-click anywhere on the chart and select "Print Chart" from the menu (below left) to display the Print dialog (below right). Unlike the non-dynamic chart there is no need to display in a new window and just the chart will be printed.



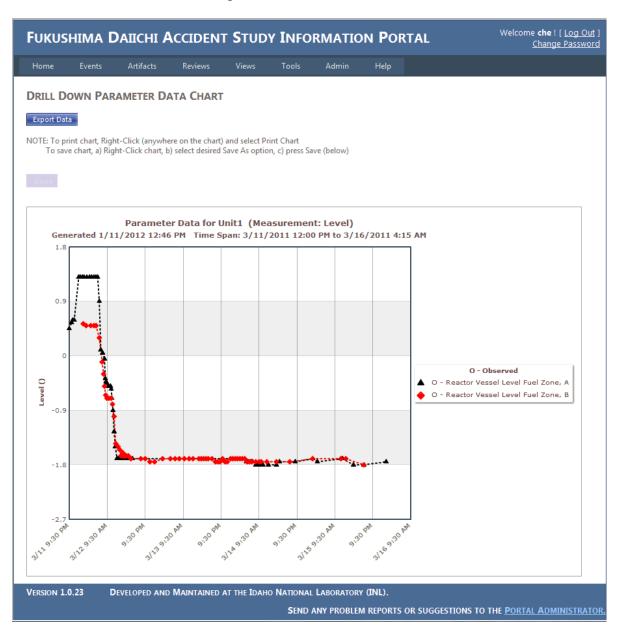


To save the chart as a JPEG, PNG, or PDF, two steps are necessary. Again, right-click anywhere on the chart, but select one of the Save as options shown in the menu (above left). The chart itself will be grayed out and a progress bar displayed as shown in the figure below.



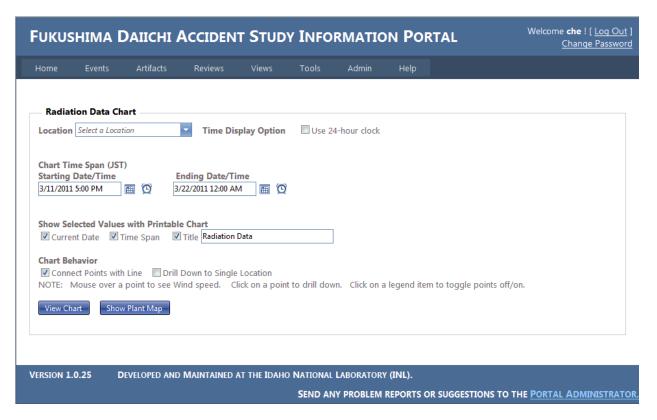
Once the capture is complete, the chart will no longer be grayed out and the "Save" button above the chart will be enabled. Pressing the "Save" button will display a dialog which will allow the file to be named and browsing the local machine to save it in the desired location as the format that it was captured as in the previous step.

This chart is also dynamic in that a drill-down capability is available. Selecting any of the points on the chart will display a drill-down chart in a new window. The drill down narrows the original time span to approximately half of the original time span depending on how close the point is to either the start or end point. (If the selected point is too close to the start or end point it will keep the start/end the same as the original value.) The drill down does not allow for the changing of any of the options but the data can be exported and the chart can be printed or saved. An example of a drill down chart is shown in the figure below.



9.6 View Radiation Plot

This menu option allows the user to view a plot of the Radiation data that was collected and uploaded into the database. The following screen allows the user to select what will be shown on the chart.



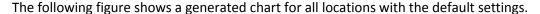
The user selects one or more locations from the drop down list. Selecting "All" will select all the locations in the list and will prevent any of the locations from being deselected. To deselect a location, deselect (uncheck) "All" and then deselect the appropriate locations. The following figure shows the location list expanded.

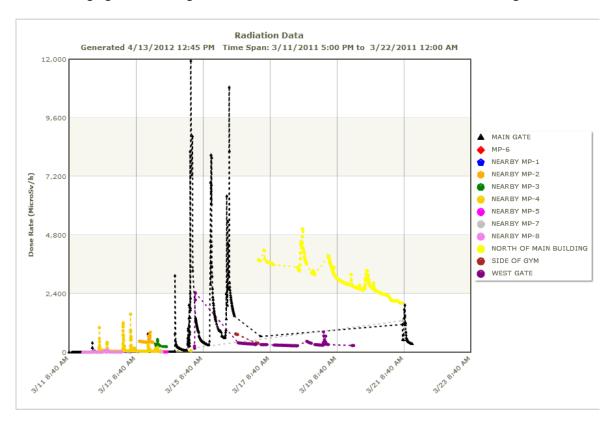


The user can choose to have times displayed in military format by checking the box next to "User 24-hour clock." The start date/time and the end date/time are defaulted to encompass the current data but can be changed as desired. The "Show Selected Values with Printable Chart" can be utilized to toggle whether the current date, time span, and title are show in the chart. The title can be set as desired.

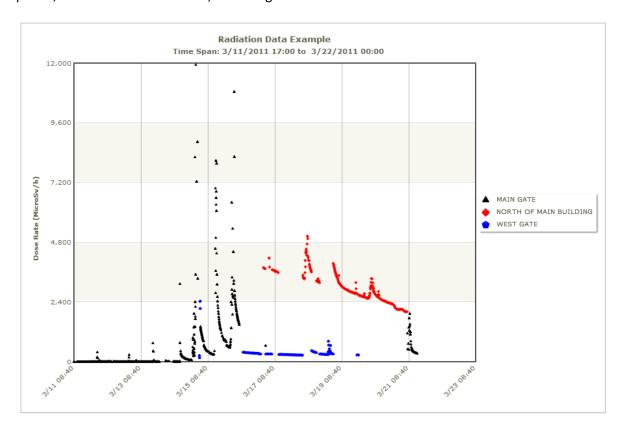
The "Chart Behavior" section can be utilized to toggle the dashed line connecting the points on the chart (the chart will have to be regenerated) and the drill down to single location will display only the selected location on the drill down chart rather than all of the originally selected locations.

Placing the mouse over a given point will show a tool tip with the wind speed and direction and the time of the reading. Clicking on a point will open a new window with a drill down chart. The drill down chart will display a shortened time span. If the "Drill Down to Single Location" check box is selected then only the measurements taken at the selected location will be shown on the drill down chart. If the check box is not selected the all measurements taken at all the locations selected for the initial chart will be displayed. Keep in mind that if a location does not have measurements that fall within the shortened time span of the drill down chart, then the location will not be displayed on the drill down chart.





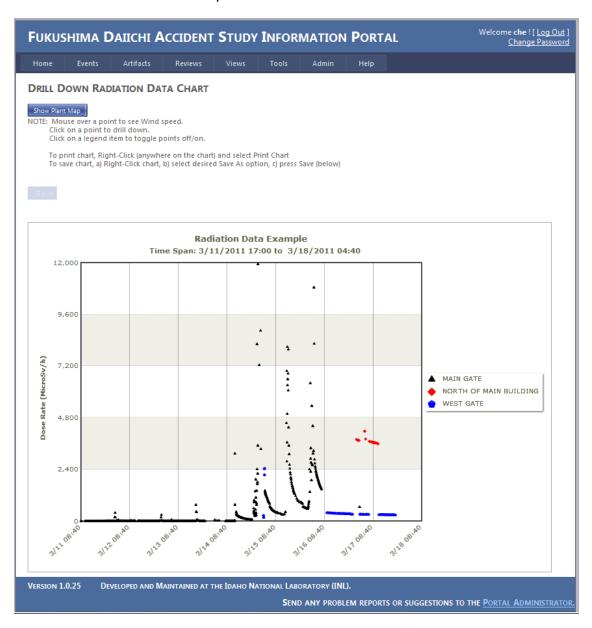
The following figure shows a generated chart for 3 locations without the lines connecting the points, without the current date, and using the 24 hour clock.



Pressing the "Show Plant Map" button will display an image of a map of the Plant in a floating window. This window can be "pinned" in place, resized, or closed. The following figure shows the map that is displayed.

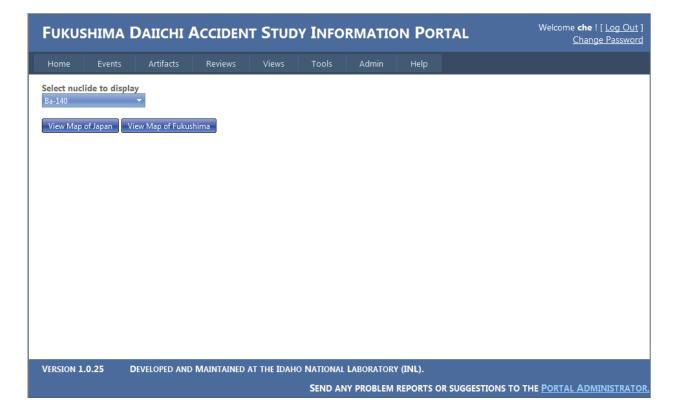


When a point on the chart is selected for a drill down chart, the drill down chart will be displayed with the same options as the original chart. These options cannot be changed on the drill down screen. A "Show Map Plant" button is available from the drill down screen as well. Multiple levels of drill down can be navigated by clicking on a point on the drill down chart. The following figure shows an example of a drill down chart. It is recommended to close all drill down windows once you are finished with them.

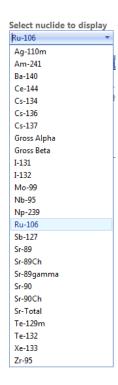


9.7 View Radiation Map

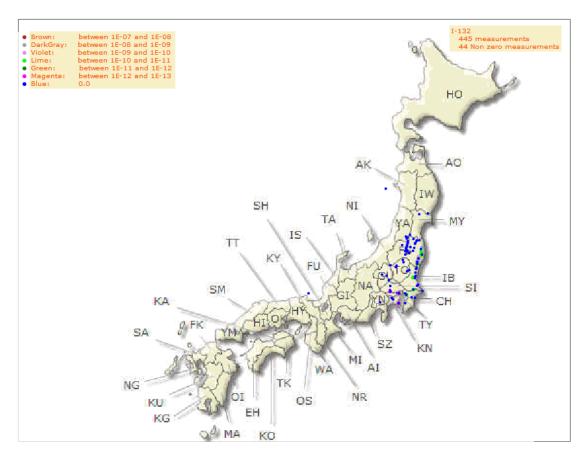
This menu option allows the user to view either a map of Japan or a Map of the Fukushima prefecture with various measurements that have been taken. The following screen is displayed when this option is selected.



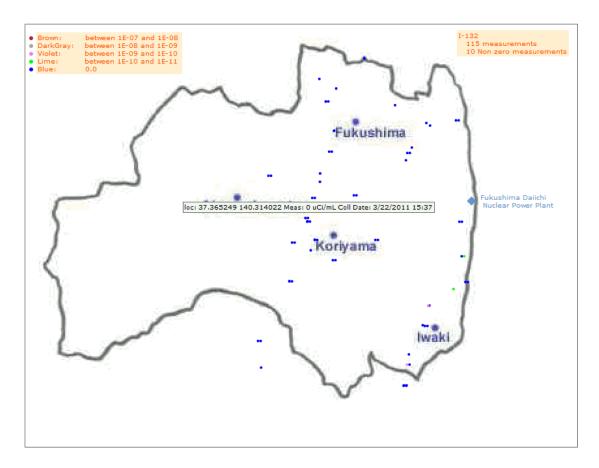
Currently, there is just one measurement spreadsheet available. The user can selected a nuclide to display from a list of nuclides available in the spreadsheet by selecting the arrow in the pull down list. The following list will be displayed.



Once the desired nuclide is selected, press either the "View Map of Japan" button or the "View Map of Fukushima" button. If both maps are displayed, the Japan map will always be above the Fukushima map. The figures below show examples of what the two maps may look like.



Each map has a legend in the upper left hand corner showing the colors and the measurement range indicated by the colors. Only colors used on the map are displayed in the legend. If the individual color is not visible on the Japan map, it could be because multiple points are at the same location. The color representing non-zero values are made slightly larger than the blue points representing zero value measurements. In the upper right hand corner is a note showing the nuclide that was selected, the number of measurements for that nuclide, and the number of nonzero measurements for that nuclide.



Because the map of the Fukushima prefecture is a smaller area than the entire country, the points that are at the same location are offset slightly to show multiple points. The text across the center of the map is a tooltip. Tooltips are available for every measurement point on the map and give the latitude and longitude of the point, the values of the measurement of that point, and the date/time the measurement was collected.

Above each chart, the following text and button will be displayed.

NOTE: To print chart, Right-Click (anywhere on the chart) and select Print Chart

To save chart, a) Right-Click chart, b) select desired Save As option, c) press Save (below)

Save

As the text on the screen indicates, simply right-click anywhere on the chart and select "Print Chart" from the menu as shown below.



The chart can be saved as a JPEG or PNG image or as a PDF, but it is a multistep process. To save the chart, right-click anywhere within the chart and select the appropriate "Save as" option. The chart will then turn gray, indicating that it is disabled and a progress window will be displayed as shown below.



Once the capture is completed, the chart will be enabled and the "Save" button shown in the figure above will also be enabled. Press the "Save" button above the chart that is being saved and a browse window will be displayed allowing a file name and location on the local system to be entered. The default name of the file is "FusionCharts" and the extension will match the "Save as" option that was selected. (I.e. png for PNG, .jpg for JPEG, or .pdf for PDF.)

9.8 View FDASIP Report

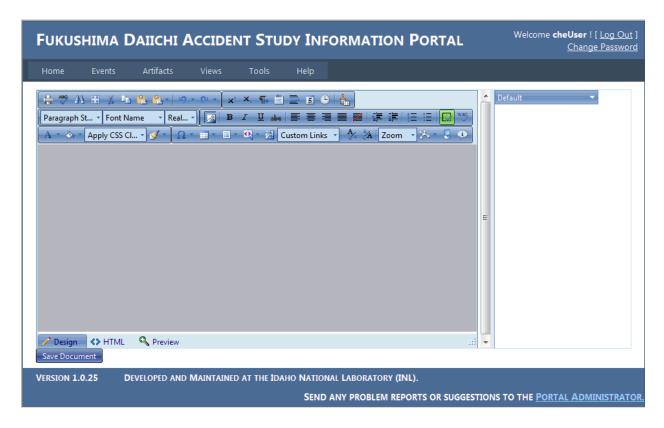
This menu option will only be visible if a report has been generated. The report can only be generated by an administrator. If this option appears on the menu, then the report has been generated by an administrator and selecting the option will display a page with a list of currently generated reports as shown in the figure below.

Each of the items in the list is a link to the given report. Selecting the link will display the report in a PDF viewer in a new browser window. The report is read only, but can be printed or saved.

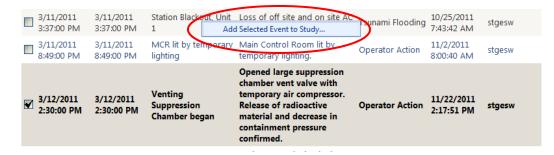
10. Tools (All Roles)

10.1 Special Studies

The tools menu provides a Special Studies option. This option allows the user to create links to other information in the website and compile a special study according the needs of the individual user. The following page is displayed when this option is selected.

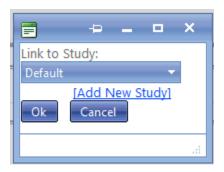


In order to create "links" to be added to a study, the user must go to the individual pages where the data exists. For example, from the Events page a link can be created from any selected event as shown in the figure below.



The desired event was selected, and then right-click was selected anywhere in the Event table. The above menu, "Add Selected Event to Study..." was then displayed as

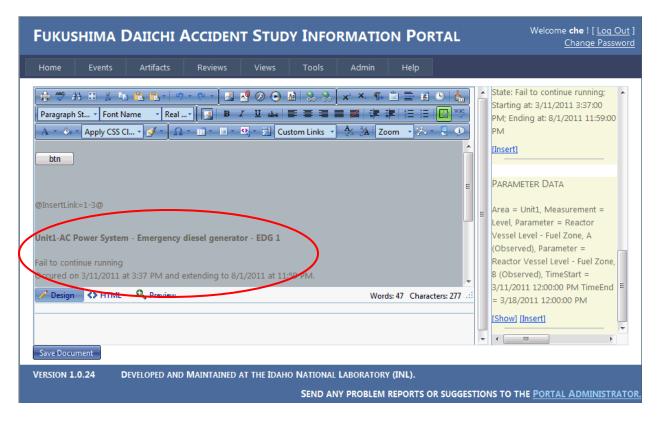
shown circled in the figure above. Selecting this menu item will display the window shown below.



From the pull down list, the appropriate study can be selected or a new study can be added by clicking the "Add New Study" link. Once the desired study is selected or entered, press Ok. The window is no longer displayed and the user remains on the Events page. Links can also be created from selected Artifacts on the Artifacts page as well as the Event Timeline (but not the Graphical Timeline), the Component State chart, and the Parameter Data Chart (but not the Dynamic Parameter Data Chart). Once the desired links are created, return to the Special Studies page and select the desired study from the pull down list as shown in the figure below.



Once the study is selected, any links generated for that study will be displayed in the right hand column as shown in the following figure.

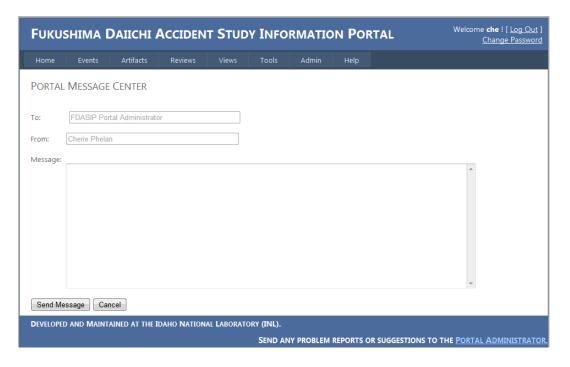


If the link represents an image, such as from the Parameter Data Chart, it will have both a "Show" and an "Insert" link. If the link represents data such as an Artifact, it will just have the "Insert" link. Selecting the "Insert" link will insert the data represented by the link into the text area. For example, selecting the "Insert" link for the top link that is partially shown in the figure above resulted in the circled text being inserted. Note that the text is inserted where the cursor was last located in the text area. Selecting the "Show" link will display a File Download window that will allow the user to open the image or save the image to the local machine. Selecting the "Insert" link for an image link will insert the image into the text area. Pressing the "Save Document" button will save the data and images inserted using links and any other changes made to the text. There are many formatting and editing options available on the toolbar provided with the text area. Saving the document allows the user to return to the study at a later time. Once any desired changes are made the user can print the document using the printer icon on the upper left hand side of the toolbar.

11. Help (All Roles)

The Help menu provides access to this User's Manual, the Send Message page, the Message log, and the About page.

The Send Message page allows the user to provide feedback to the FDASIP Administrator. The user enters the desired comments and presses the "Send Message" button. The Send Message page is displayed in the following figure.



The About page is displayed below.

Welcome **che** ! [Log Out] FUKUSHIMA DAIICHI ACCIDENT STUDY INFORMATION PORTAL Change Password Artifacts **FUKUSHIMA DAIICHI ACCIDENT STUDY INFORMATION PORTAL** The accident at the Fukushima nuclear power station in Japan is one of the most serious in commercial nuclear power plant operating history. As its story unfolds, much will be learned that may be applicable to the U.S. reactor fleet, nuclear fuel cycle facilities, and supporting systems, and may be relevant to the international reactor fleet. For example, lessons from Fukushima may be applied to emergency response planning, reactor operator training, accident scenario modeling, human factors engineering, radiation protection, and accident mitigation; as well as influence U.S. policies towards the nuclear fuel cycle including power generation, spent fuel storage, reprocessing, and disposal. The NRC and DOE NE have agreed to jointly sponsor an accident reconstruction study. The study team will include subject matter experts from Idaho National Laboratory (INL), Oak Ridge National Laboratory (ORNL), and Sandia National Laboratories (SNL). The intent of this portal is to provide an approach to collecting, storing, retrieving, and validating information and data for use in reconstructing the Fukushima accidents and to assist the other team members by providing support for the technical basis behind the event reconstruction. Version: 1.0.21 For more information contact the INL Team Lead, Curtis Smith at 208-526-9804. **VERSION 1.0.21** DEVELOPED AND MAINTAINED AT THE IDAHO NATIONAL LABORATORY (INL). SEND ANY PROBLEM REPORTS OR SUGGESTIONS TO THE PORTAL ADMINISTRATOR